Commonwealth
of Massachusetts

Deval L. Patrick
Governor

Timothy P. Murray
Lieutenant Governor

JudyAnn Bigby, M.D.
Secretary
Executive Office of Health
and Human Services

Seena Perumal Carrington
Acting Commissioner
Division of Health Care
Finance and Policy

Massachusetts Total Medical Expenses: 2009 Baseline Report

June 2011

DIVISION OF
Health Care
Finance and Policy

Table of Contents

Executive Summary

Pursuant to the provisions of M.G.L. c. 118G, § 6, the Massachusetts Division of Health Care Finance and Policy (DHCFP) is required to promulgate regulations for the uniform calculation and reporting by payers of health status adjusted total medical expenses (TME) and to publicly report that data. In this report, DHCFP examines how total health care expenditures for member populations vary by carrier, region, income, primary care physician group, and participation in a managed or non-managed care plan. For this analysis, DHCFP analyzed TME data reported by payers for calendar year 2009.[1]

TME is defined as the total health care expenditures for a member population based on allowed claims for all categories of medical expenses and all non-claims related payments to providers. TME is always expressed on a per member per month (PMPM) basis.

More simply, TME measures the total spending on medical care for a covered population. Medical spending is based on insurer payments, including outlier payments and non-claims payments to health care providers such as pay for performance amounts and risk-sharing capitation settlements, as well as member cost-sharing. TME incorporates both service price and service volume, as it includes all payments for medical care made on behalf of members.[2]

Unadjusted and Health Status Adjusted TME

TME can be measured on an unadjusted basis which reflects actual spending but does not consider differences among member populations. TME may also be adjusted to reflect differences in member health status such as age, gender, and clinical profile. This report presents both unadjusted and health status adjusted TME data.

Unadjusted TME is presented for aggregated analyses across payers, such as statewide and regional analyses. Unadjusted TME had to be used for such purposes since payers in this analysis utilized different health status adjustment products.

Health status adjusted TME is analyzed in order to compare health care expenditures of different member populations within a payer's membership. TME is presented on a health status adjusted basis for payer-specific regional analysis, managed and non-managed populations, and primary care physician groups within a payer's network.

---

[1] TME data was analyzed from Blue Cross Blue Shield of Massachusetts, Fallon Community Health Plan, Harvard Pilgrim Health Care, Neighborhood Health Plan, and Tufts Health Plan. These five payers account for approximately 66% of Massachusetts covered lives. However, some data was excluded as it did not capture complete medical spending. Full claims data included in the TME analyses represents approximately 52% of Massachusetts privately covered lives.

[2] Since TME is the result of both price and utilization, it is not possible to uncouple the influence of either one directly. However, recent research has indicated that higher prices were the primary driving factor in increased privately insured health care spending from 2007 to 2009. See Division of Health Care Finance and Policy, Trends in Health Expenditures, June 2011, available at: http://www.mass.gov/Eeohhs2/docs/dhcfp/cost_trend_docs/cost_trends_docs_2011/health_expenditures_report.pdf, accessed 6/19/2011.

Key Findings

- **Massachusetts statewide unadjusted total medical expenses in the commercial market were $403 PMPM in 2009.** Hospital inpatient and outpatient services accounted for 41% of unadjusted total medical expenses, while physician services represented 28%, followed by spending for prescription drugs at 17%. The balance of spending went towards non-physician professional services (5%), other medical expenses (5%), and non-claims payments including performance incentive payments and capitation risk settlements (4%).
- **There is significant variation in unadjusted TME by payer, ranging from $356 PMPM for Neighborhood Health Plan to $412 PMPM for Blue Cross Blue Shield of Massachusetts.** Unadjusted TME represents actual spending, and the reason for these variations requires further analysis. Among the potential contributing factors include differences in the health status of members, the geographic residence of members, utilization differences, provider network, and different payment rates and methods.
- **There are considerable differences in TME by geographic area, based on member residence.** At the regional level, unadjusted TME ranged from $372 PMPM in central Massachusetts to $426 PMPM in the North Shore region, a variation of nearly 15%.[3]
- **There is a correlation between health status adjusted average TME for the residents of a city and the median income of that city.**
- **The health status adjusted TME of members in managed care plans was higher than TME for non-managed members for Blue Cross Blue Shield of Massachusetts and Harvard Pilgrim Health Care and virtually identical for Tufts Health Plan.** It is important to note that unadjusted total medical expenses per member were higher for non-managed members than managed members across all payers in this analysis. The significant impact of health status adjustment on TME suggests that the non-managed population is generally less healthy and requires greater medical resources than the managed population.

[3] For individual cities and towns with at least 3,000 members, health status adjusted TME varied by as much as 60% for Blue Cross Blue Shield of Massachusetts (from a low of $305 in Holyoke to $489 in Watertown), 27% for Harvard Pilgrim Health Care (from a low of $353 in Lowell to $450 in Brookline), and 28% for Tufts Health Plan (from a low of $337 in Lowell to $431 in Newton).

- **There is significant variation in health status adjusted TME across primary care physician groups, with a difference of 55% among physician groups in one payer's network.**
- **Several primary care physician groups tended to have relatively higher or relatively lower TME across multiple payer networks.** Physician local practice groups with higher TME across payer networks had higher spending in every service category, with the greatest differences between the higher and lower groups in spending for hospital outpatient and physician services. Hospital outpatient spending was $36 PMPM or 43% greater for higher relative TME practice groups than for lower relative TME practice groups. Spending for physician services was $19 PMPM or 18% greater for higher relative TME physician groups than for lower relative TME physician groups.
- **The number of managed care members at a parent physician group does not appear to be correlated with the level of physician group TME on a PMPM basis.** This suggests that larger or smaller membership is not a significant factor in explaining variations in medical spending.
- **Health plan membership is disproportionately concentrated at physician local practice groups with higher TME.** Two of the three largest payers had more than half of their managed care members at physician local practice groups with health status adjusted TME above the median for all physician groups. This concentration of membership at physician groups with relatively high TME likely contributes to higher overall medical spending on a statewide level.

These baseline analyses suggest that total medical expense is potentially a useful measure for understanding and monitoring health care spending in Massachusetts. The significant variation in TME identified across geographic regions and primary care physician local practice groups suggest that there are opportunities to reduce health care spending in Massachusetts. It is critical that Massachusetts health care stakeholders identify the factors that cause variation in medical expenses and implement effective strategies to moderate spending.

Introduction

Sections 11, 13, and 51 of Chapter 288 of the Acts of 2010 direct the Division of Health Care Finance and Policy (DHCFP) to promulgate regulations for the uniform calculation and reporting by payers of health status adjusted total medical expenses (TME), reported on a per member per month (PMPM) basis, and to publicly report that data. Specifically, section 51 requires DHCFP to develop a uniform method to apply to a uniform list of provider groups and their constituent local practice groups and for each zip code in the Commonwealth. The uniform method for calculating and reporting total medical expenses must, at a minimum:

(i) specify a uniform method for calculating total medical expenses based on allowed claims for all categories of medical expenses, including, but not limited to, acute inpatient, hospital outpatient, sub-acute such as skilled nursing and rehabilitation, professional, pharmacy, mental health and behavioral health and substance abuse, home health, durable medical equipment, laboratory, diagnostic imaging and alternative care such as chiropractic and acupuncture claims, incurred under all fully insured and self insured plans;

(ii) specify a uniform method for including in the calculation all non-claims related payments to providers, including supplemental payments of any type, such as pay for performance, care management payments, infrastructure payments, grants, surplus payments, lump sum settlements, signing bonuses and government payer shortfall payments, infrastructure, medical director and health information technology payments;

(iii) specify a uniform method for adjusting total medical expenses by health status;

(iv) designate the minimum member membership in a local practice group for individual reporting of total medical expenses by local practice group;

(v) specify a uniform method for reporting total medical expenses in aggregate for all local practice groups that fall below the minimum member membership;

(vi) specify a uniform method for reporting total medical expenses by zip code separately for members whose plans require them to select a primary care provider, and members whose plans do not require them to select a primary care provider;

(vii) designate and annually update the comprehensive list of provider groups and local practice groups and zip codes for which payers shall report total medical expenses; and

(viii) specify a uniform format for reporting that includes the raw and adjusted health status score and member membership for each local practice group and zip code.

Consultative and Regulatory Development Process

To develop a method for calculating and reporting total medical expenses, DHCFP held initial consultations with several large Massachusetts health care payers in August 2010. In September 2010, DHCFP convened a Technical Advisory Group (TAG) consisting of representatives from Massachusetts health care payers, hospitals, physician groups, and state agencies. Following several meetings with the TAG and a public consultative session, DHCFP proposed a regulation specifying a uniform TME calculation and subsequently promulgated regulation 114.5 CMR 23.00: Payer Reporting of Total Medical Expenses and Relative Prices.

What is Total Medical Expense (TME)?

Total medical expenses (TME) are defined as the total health care expenditures for a member population based on allowed claims for all categories of medical expenses and all non-claims related payments to providers, and expressed on a per member per month basis. More simply, TME measures the total spending of medical care for a covered population. Medical spending is based on allowed claims for all categories of medical expenses including member cost-sharing, outlier payments, as well as non-claims payments to health care providers such as pay for performance amounts and capitation settlements. TME incorporates both service price and service volume, as it includes all payments for medical care made on behalf of members.[4]

TME can be measured on an unadjusted basis which reflects actual spending but does not consider differences among member populations. TME may also be adjusted to reflect differences in member health status such as age, gender, and clinical profile.

This report presents both unadjusted and health status adjusted TME data. Unadjusted TME is presented for aggregated analyses across payers, such as statewide and regional analyses. Unadjusted TME is used for these purposes since the payers in this analysis utilized different health status adjustment products.

Health status adjusted TME is analyzed in order to compare health care expenditures of different member populations within a payer's membership. TME is presented on a health status adjusted basis for payer-specific regional analysis, managed and non-managed populations, and primary care physician groups within a payer's network.

[4] Since TME is the result of both price and utilization, it is not possible to uncouple the influence of either one directly. However, recent research has indicated that higher prices were the primary driving factor in increased privately insured health care spending from 2007 to 2009. See Division of Health Care Finance and Policy, Trends in Health Expenditures, June 2011, available at: http://www.mass.gov/Eeohhs2/docs/dhcfp/cost_trend_docs/cost_trends_docs_2011/health_expenditures_report.pdf, accessed 6/19/2011.

A recent report issued by DHCFP, *Price Variation in Massachusetts Health Care Services*, notes the wide variation in prices paid to providers for certain routine services.[5] The TME analyses contained in this report complement that work by examining how total health care expenditures for member populations vary by carrier, region, income, primary care physician group, and participation in a managed or non-managed care plan. Over time, these analyses will allow the Commonwealth to measure trends in TME and facilitate monitoring of efforts to reduce health care cost growth.

Limitations of TME

While TME is an important measure, it is essential to understand its limitations in drawing conclusions.

- TME is an overall measure of a covered population's health care spending. As the TME data is reported in summary form, it includes the combined effect of price, utilization, and service mix. Thus, TME should not be interpreted as a direct measure of service price.
- Physician group practices that serve predominantly pediatric patients cannot be appropriately compared to physician groups that generally care for an adult population due to differences in member populations and resource needs. For this reason, pediatric group practices are not included in the physician group analysis.[6] However, statewide, regional, and payer-specific TME data contains members of all ages, including children.
- In many cases, health care payers use different health status adjustment tools or versions of the same tool, precluding direct comparisons between the health status adjusted TME of different payers.
- Capitation payments or settlements are reported separately from other categories of medical spending, which may result in over or understated categories of medical spending. For example, capitation payments to some medical groups may include projected spending for certain non-physician services, which means that total spending for those services is under-reported in the relevant category of expense.

[5] See Division of Health Care Finance and Policy, Price Variation in Massachusetts Health Care Services, June 2011, available at: http://www.mass.gov/Eeohhs2/docs/dhcfp/cost_trend_docs/cost_trends_docs_2011/price_variation_report.pdf, accessed 6/19/2011.

[6] The following pediatric practices are excluded from the physician group analysis: Affiliated Pediatric Practices; Garden City Pediatric Associates; Pediatric Physicians Organization at Children's; and Woburn Pediatric Associates.

About the Data

Regulation 114.5 CMR 23.00 governs the reporting method and filing requirements for health care payers reporting TME. The regulation requires the annual filing of TME data by: the twelve largest private health care payers as determined by DHCFP based on Massachusetts health care payments; private payers that contract with MassHealth (the Commonwealth's Medicaid program), the Commonwealth Connector, or the Group Insurance Commission; and Medicare and MassHealth. TME data must be filed for primary care physician groups and by member zip code.

- *Primary care physician group TME* measures the total per member health care spending of members whose plans require the selection of a primary care provider associated with a physician group. Because health plans can only link a member's medical spending to a primary care provider if the member participates in a managed care plan, physician group TME contains exclusively managed care member information. The data reported for each physician group include total health care expenditures for these members, even when care was provided outside of the provider group.
- *Zip code TME* measures the total per member health care spending of each Massachusetts zip code, based on member residence, rather than where members received services. Zip codes are self-reported by members, which may lead to certain inaccuracies, particularly in areas with high student or other transient populations.

DHCFP retained Oliver Wyman Actuarial Consulting to provide support in conducting the analyses contained in this report.

The analyses in this report are based on data submitted for members with private, commercial insurance. Future reports will include analysis of public payer TME data. Commercial insurance categories for which DHCFP required reporting are defined below.

- *Commercial full claims* data includes both self and fully insured commercial business for which claims for all medical services were available to the reporting carrier. This data captures complete medical spending and was used to calculate commercial TME.
- This report does not include data collected by DHCFP for *commercial partial claims*, which includes self and fully insured commercial business where the employer separately contracts for one or more specialized services, such as pharmacy or behavioral health service management. In these cases, the reporting carrier does not have access to the claims for the separately contracted services. As the full range of medical expenses is not included in the data reported by the payers, these partial claims are not included in the TME analyses contained in this report

At the time of this report's development, DHCFP had received TME data from nine payers. Data from two payers was excluded due to data quality concerns. Data from an additional two payers was excluded as they did not report any commercial full claims TME data. Ultimately, these analyses represent calendar year 2009 data submitted by five payers; from which DHCFP analyzed all commercial full claims data received.[7] The list of analyzed payers is below, along with the associated member months for each insurance category for the reporting year.

Table 1: Payer Member Months by Insurance Category (2009)[8]

Payer Name	Member Months			
	Commercial full claims	Commercial partial claims	Medicaid MCO	Medicare MCO
Blue Cross and Blue Shield of Massachusetts[9]	14,527,715	5,837,058	--	401,409
Fallon Community Health Plan[10]	1,543,031	189,074	258,219	365,846
Harvard Pilgrim Health Care[11]	7,120,416	375,924	--	268,605
Neighborhood Health Plan	339,950	--	1,987,187	--
Tufts Health Plan[12]	4,126,576	1,554,933	--	889,178

[7] These five payers account for approximately 66% of Massachusetts covered lives. (Estimate based on Division of Health Care Finance and Policy, *Health Care in Massachusetts Key Indicators: November 2010*, available at: http://www.mass.gov/Eeohhs2/docs/dhcfp/r/pubs/10/key_indicators_november_2010.pdf, accessed 6/19/2011.) However, some data was excluded as it did not capture complete medical spending. Commercial full claims data included in these analyses account for approximately 52% of Massachusetts privately covered lives.

[8] Although Medicaid and Medicare managed care organization (MCO) data was submitted to DHCFP, this data is not included in this report.

[9] Blue Cross and Blue Shield of Massachusetts includes HMO Blue Inc.

[10] Fallon Community Health Plan includes Fallon Health and Life Assurance Company.

[11] Harvard Pilgrim Health Care includes Health Plans, Inc.

[12] Tufts Health Plan refers to Tufts Associated Health Maintenance Organization, Inc.

Section 1: Statewide Total Medical Expenses

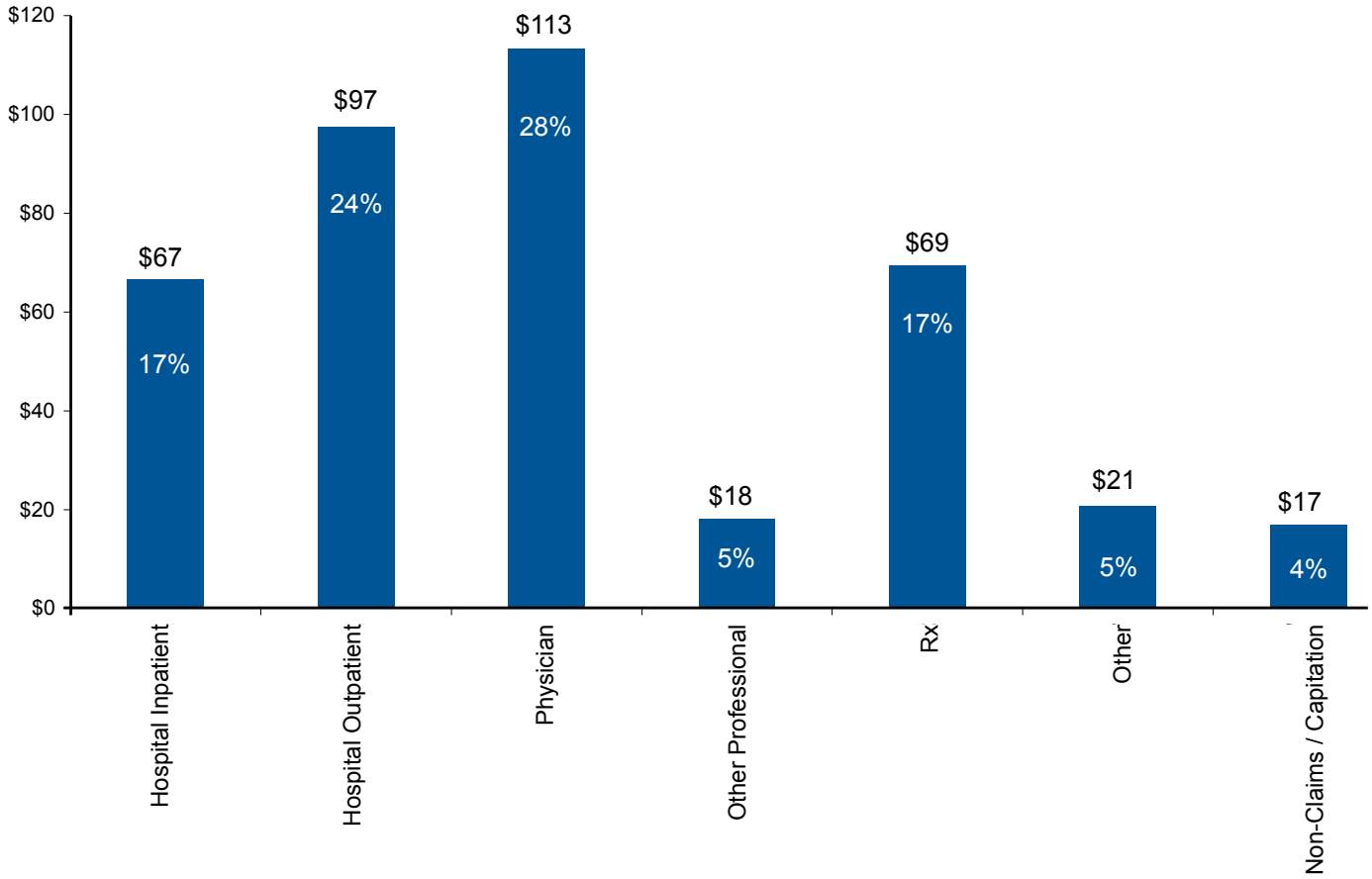
Method: The data presented in this section reflects actual spending but do not account for expected differences in expenses due to differences in population health status. The unadjusted statewide figure is the sum of total claims and non-claims payments made to all providers on behalf of Massachusetts resident members on a PMPM basis. Service categories are as reported by payers and may be based on different categorization and allocation methods. Please see the Appendix for more information regarding service categories definitions. Commercial partial claims data was excluded from this analysis.

According to numerous sources, Massachusetts medical spending outstrips that of the rest of the nation by a significant amount. Although no other state requires reporting of spending data comparable to TME, health expenditures data available from the Centers for Medicare and Medicaid Services (CMS) reports that Massachusetts has had the highest per capita health spending in the United States since 1991, with the exception of three years in the 1990s. According to CMS, in 2004, Massachusetts spending per capita was 27% higher than health care spending nationwide.[13]

- Massachusetts statewide total medical expenditures in the commercial market were $403 PMPM in 2009. This figure is unadjusted for member health status.
- Hospital inpatient and outpatient services accounted for 41% of total medical expenses, while physician services represented 28%, followed by spending for prescription drugs at 17%.
- The balance of spending went towards non-physician professional services (5%), other medical expenses (5%), and non-claims payments including performance incentive payments and capitation risk settlements (4%).

[13] More information on CMS health expenditures data is available at: http://www.cms.gov/nationalhealthexpenddata/01_overview.asp?, accessed 6/19/2011.

Figure A: Service Categories of Unadjusted 2009 Commercial Statewide TME (PMPM and Percent of TME)



Section 2: Payer-Specific Total Medical Expenses

This section examines payer-specific unadjusted TME, and both unadjusted and health status adjusted TME for commercial members in managed and non-managed plans. Since each payer used its own health status adjustment tool or version, health status adjusted numbers cannot be compared across payers. Caution should also be taken when comparing unadjusted numbers as member health status may vary significantly among payers. For the managed and non-managed comparisons, both unadjusted TME and health status adjusted TME are examined to explore the impact of health status on managed and non-managed medical expenditures.

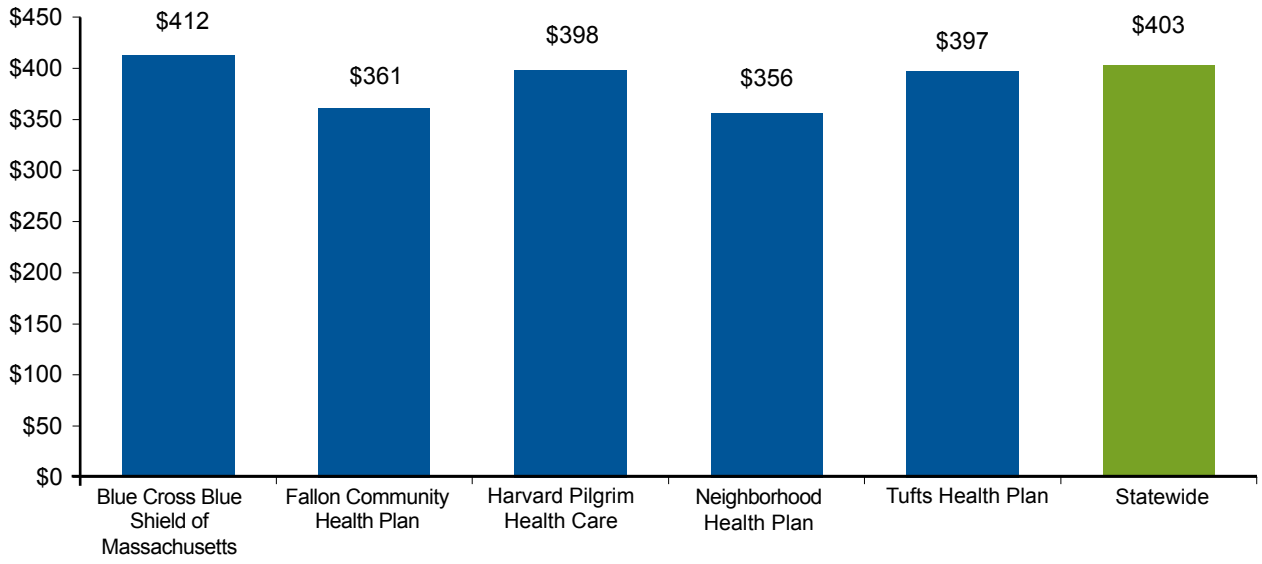
Analyses contained in this section find:

- There is significant variation in unadjusted TME by payer, ranging from $356 PMPM for Neighborhood Health Plan to $412 PMPM for Blue Cross Blue Shield of Massachusetts. The reason for these variations requires further analysis. Among the factors that could be important include differences in the health status of members, the geographic residence of members, differing utilization patterns, and different provider payment rates and methods.
- The health status adjusted TME of members in managed care plans was higher than TME for non-managed members for Blue Cross Blue Shield of Massachusetts and Harvard Pilgrim Health Care and virtually identical for Tufts Health Plan. Unadjusted total medical expenses per member were higher for non-managed members than managed members across all payers in this analysis. The significant impact of health status adjustment on TME suggests that the non-managed population is generally less healthy and requires greater medical resources than the managed population.

Section 2.1: Unadjusted TME Across Payers

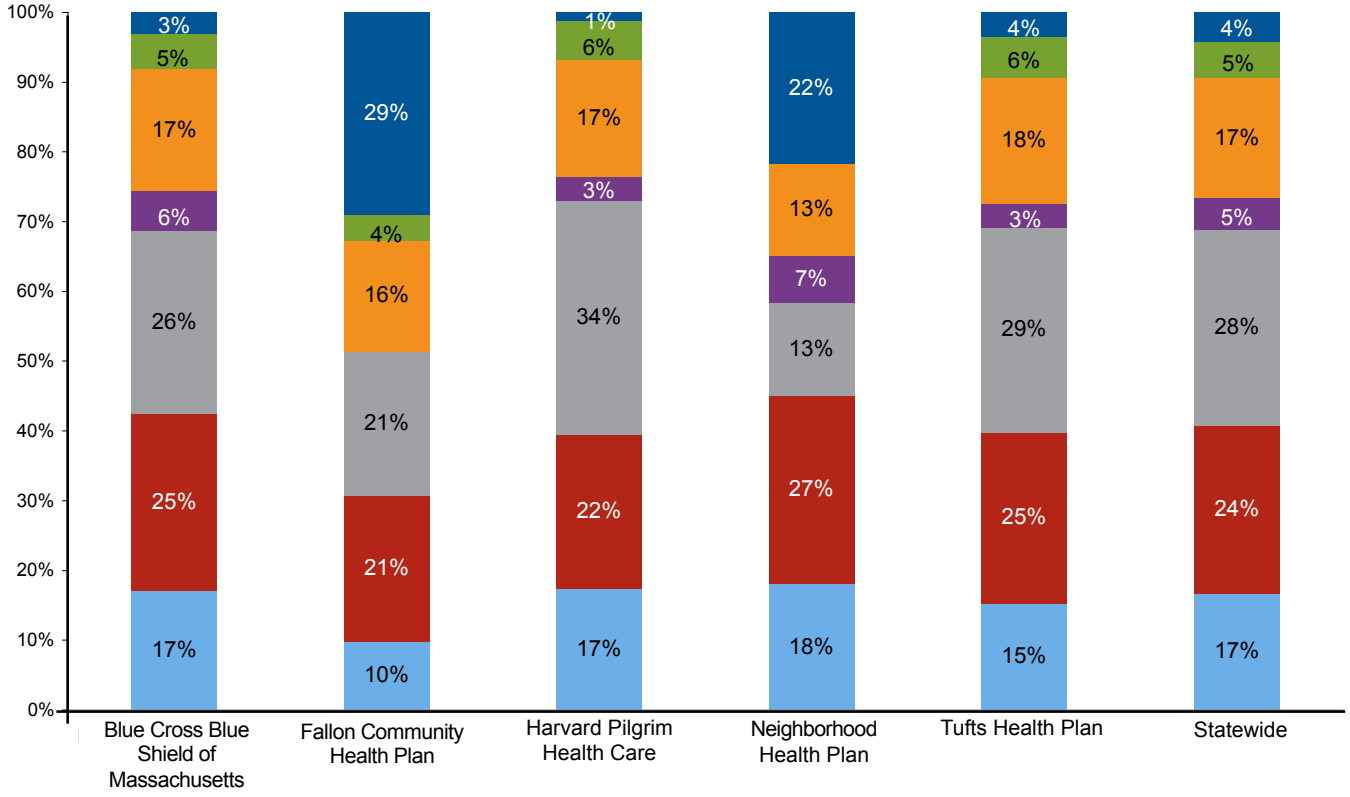
Unadjusted total medical expenses varied across the payers analyzed by 16% from $356 PMPM as reported by Neighborhood Health Plan to $412 PMPM as reported by Blue Cross Blue Shield of Massachusetts. The statewide unadjusted figure of $403 PMPM reflects the larger market share of the three insurers with the highest unadjusted TME.

Figure B: Unadjusted Commercial TME by Payer (PMPM)



In Figure C, the distribution of each payer's unadjusted TME by type of service are displayed to illustrate the variation in proportional spending on the various service categories of medical expenditures among payers. Note that payers may have allocated payments differently into service categories. Additionally, some payers reported a high proportion of capitation payments, which would tend to understate spending on specific TME service categories as compared to payers who report a smaller proportion of capitation payments.

Figure C: Proportion of Unadjusted Commercial TME by Service Category by Payer



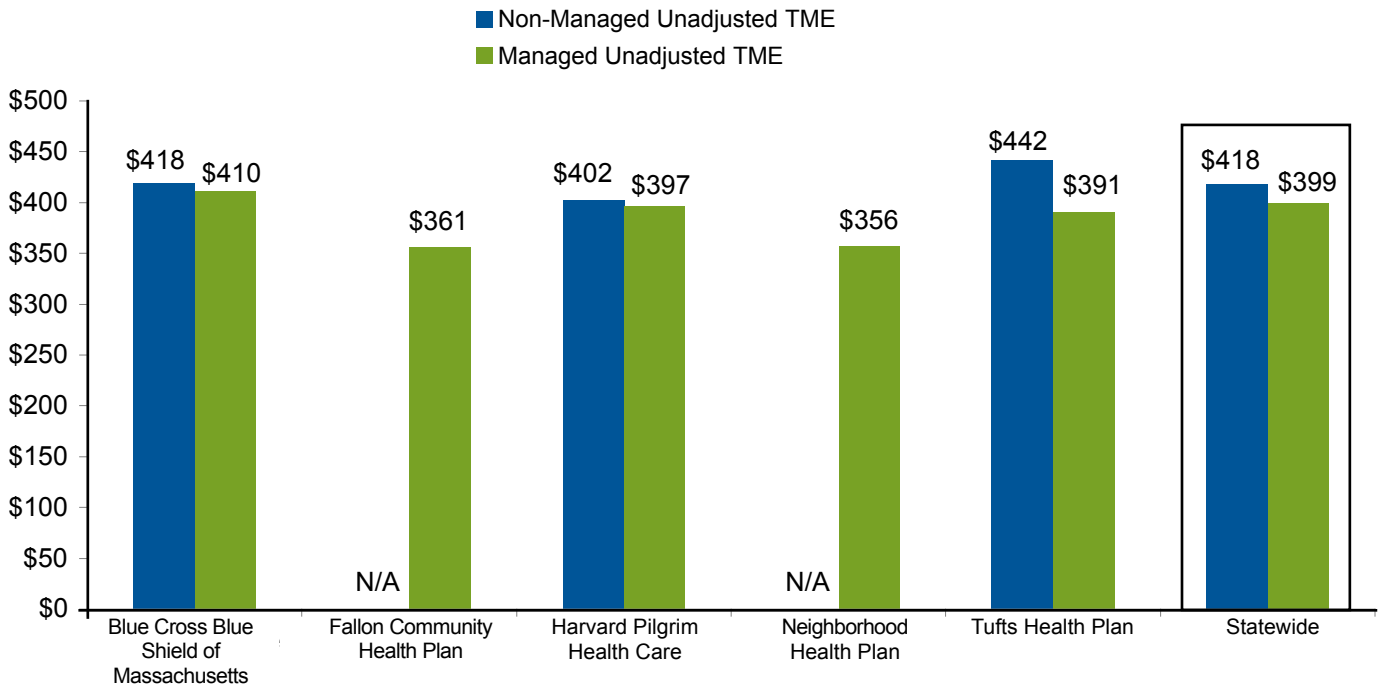
Service Category	Blue Cross Blue Shield of Massachusetts	Fallon Community Health Plan	Harvard Pilgrim Health Care	Neighborhood Health Plan	Tufts Health Plan	Statewide
Non-Claims/Capitation	$13	$105	$5	$77	$14	**$17**
Other	$21	$13	$23	$0	$23	**$21**
Rx	$72	$57	$67	$47	$72	**$69**
Other Professional	$23	$0	$14	$24	$14	**$18**
Physician	$108	$75	$133	$48	$116	**$113**
Hospital Outpatient	$104	$75	$88	$96	$98	**$97**
Hospital Inpatient	$71	$36	$69	$64	$61	**$67**
Total	**$412**	**$361**	**$398**	**$356**	**$397**	**$403**

Section 2.2: Managed and Non-Managed TME

In this analysis, TME for commercial members in managed and non-managed plans are compared on both an unadjusted and health status adjusted basis. Managed care members are those whose plans require the selection of a primary care provider with patient management and referral responsibilities. Since Neighborhood Health Plan and Fallon Community Health Plan have little to no non-managed members, only their managed TME is shown. As in the previous analysis, care must be taken in making comparisons among the health plans because each plan uses a different health status adjustment methodology.

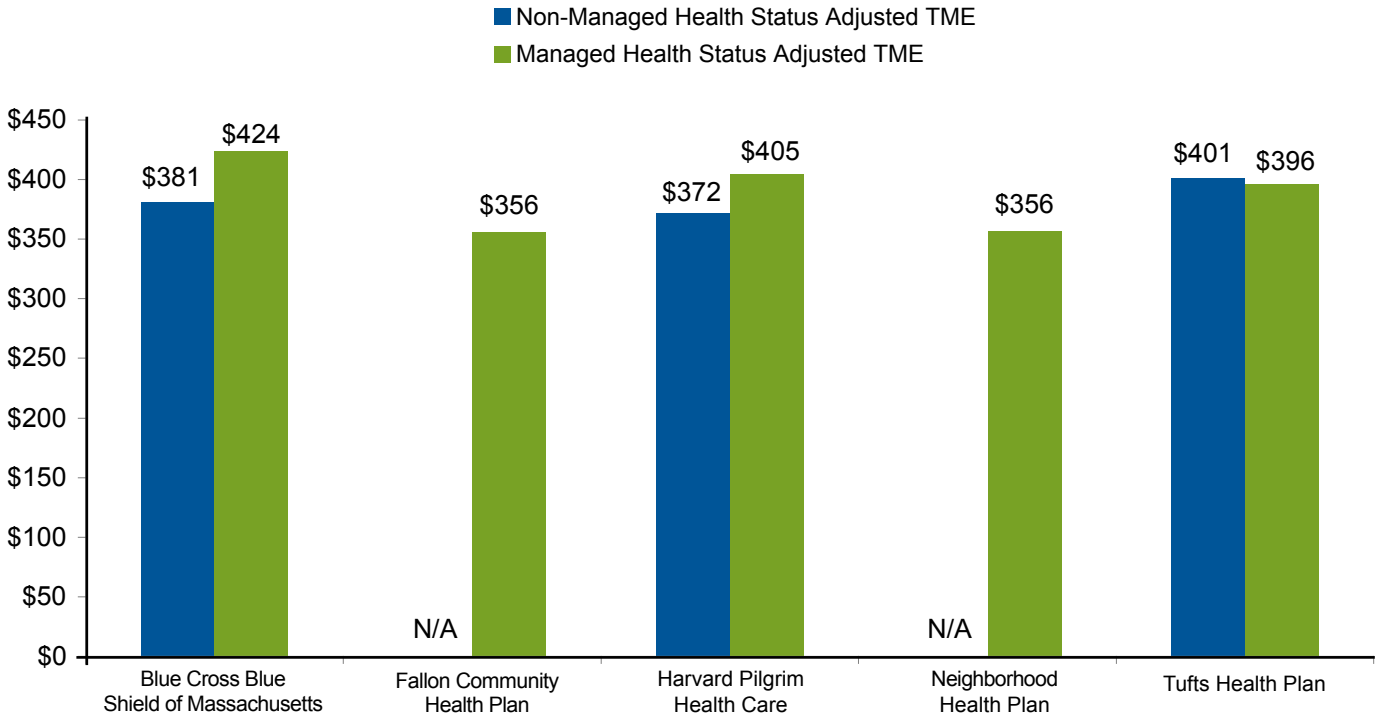
Unadjusted total medical expenses per member were higher for non-managed members than managed members across all payers in this analysis. Tufts Health Plan reported the greatest difference at an additional $51 PMPM or 13%, on an unadjusted basis for its non-managed compared to managed members. Unadjusted TME for all five payers combined was $418 for non-managed members and $399 for managed members, a difference of $19 PMPM, or 5% higher.

Figure D: Managed and Non-Managed Unadjusted Commercial TME by Payer (PMPM)



However, as shown in Figure E, after adjusting for health status, TME of non-managed members is lower than TME for managed members for Blue Cross Blue Shield of Massachusetts and Harvard Pilgrim Health Care. TME for Tufts Health Plan non-managed members remained slightly higher than its managed members, closing the unadjusted difference in TME gap from $51 to just $5 PMPM on a health status adjusted basis.

Figure E: Managed and Non-Managed Health Status Adjusted Commercial TME by Payer (PMPM)



The significant impact of health status adjustment on TME for managed and non-managed suggests that the non-managed population is generally less healthy and requires greater medical services than the managed population.

Section 3: Regional Total Medical Expenses

Method: Regional TME analyses are based on member zip code TME data submitted to DHCFP which has been aggregated to various levels. The regions in Section 3.1 are defined by DHCFP and reflect broad geographical discharge patterns. City level data presented in Sections 3.2, 3.3, and 3.4 was aggregated based on information available from the Secretary of the Commonwealth's website. Only cities in which at least 3,000 members were reported in 2009 were analyzed. Income data was obtained from 2007 IRS tax filings. TME is reported on a PMPM basis.

This section explores the extent to which medical spending varies by region. Total medical expenditures may be influenced by several factors, including member health status, provider prices, use of more or less expensive services, and the use of more or less medical services.

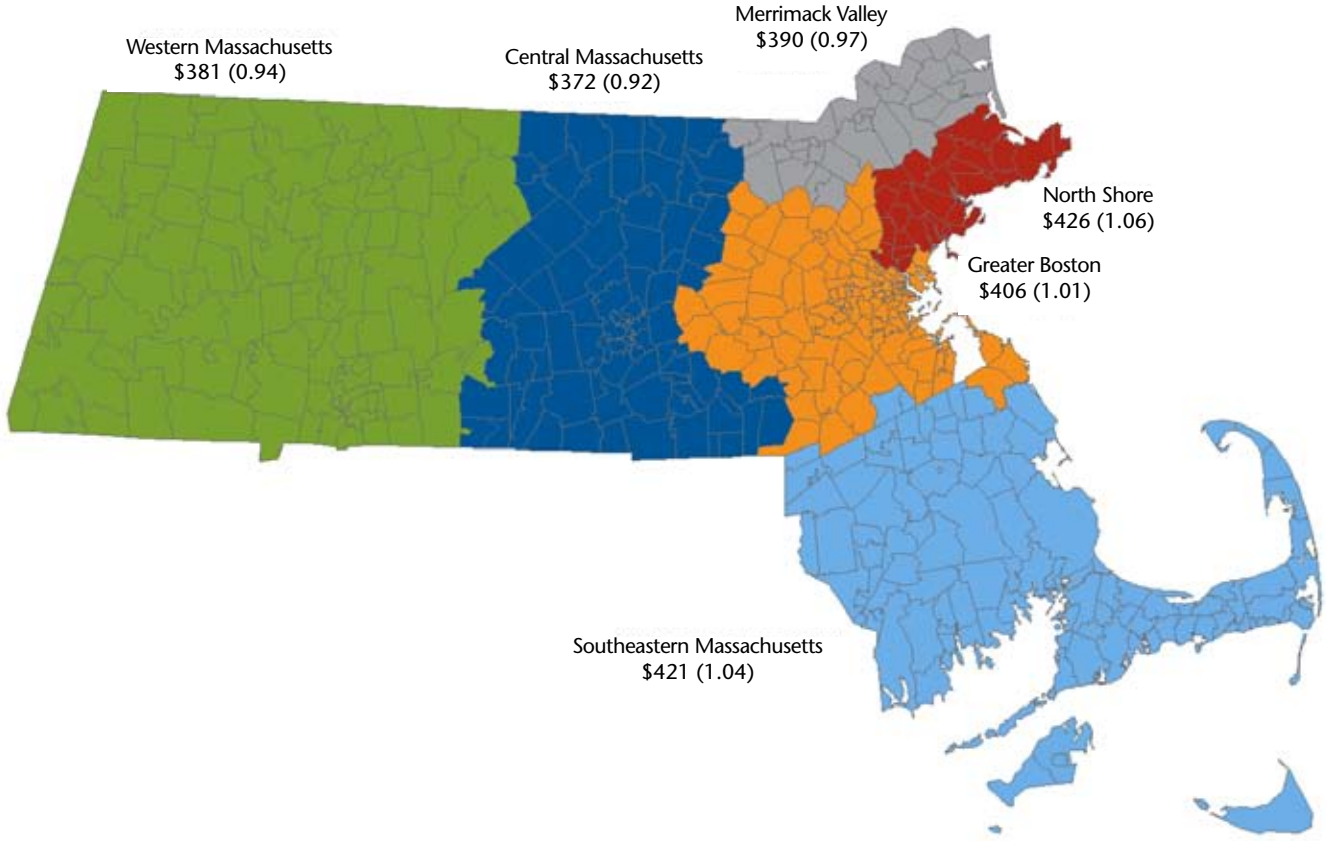
This section finds that:

- There are considerable differences in TME by geographic area, based on member residence.
  - At the regional level, unadjusted TME ranged from $372 PMPM in central Massachusetts to $426 PMPM in the North Shore region, a variation of nearly 15%.
  - For individual cities and towns with at least 3,000 members, health status adjusted TME varied by 60% for Blue Cross Blue Shield of Massachusetts (from a low of $305 in Holyoke to $489 in Watertown), 27% for Harvard Pilgrim Health Care (from a low of $353 in Lowell to $450 in Brookline), and 28% for Tufts Health Plan (from a low of $337 in Lowell to $431 in Newton).
- There is a correlation between health status adjusted average TME for the residents of a city and the median income of that city.

Section 3.1: Regional TME

Figure F shows unadjusted commercial TME PMPM and relative TME as compared to the total statewide figure ($403 PMPM) for Massachusetts geographic regions. Unadjusted commercial medical spending varied across these broad geographic regions of the Commonwealth by approximately 15%. Commercial medical expenditures were highest in the North Shore and southeastern Massachusetts, and lowest in central and western Massachusetts. It is important to note that health status may vary by region, which may impact relative rankings.

Figure F: Unadjusted Commercial TME and Relative Commercial TME by Geographic Region

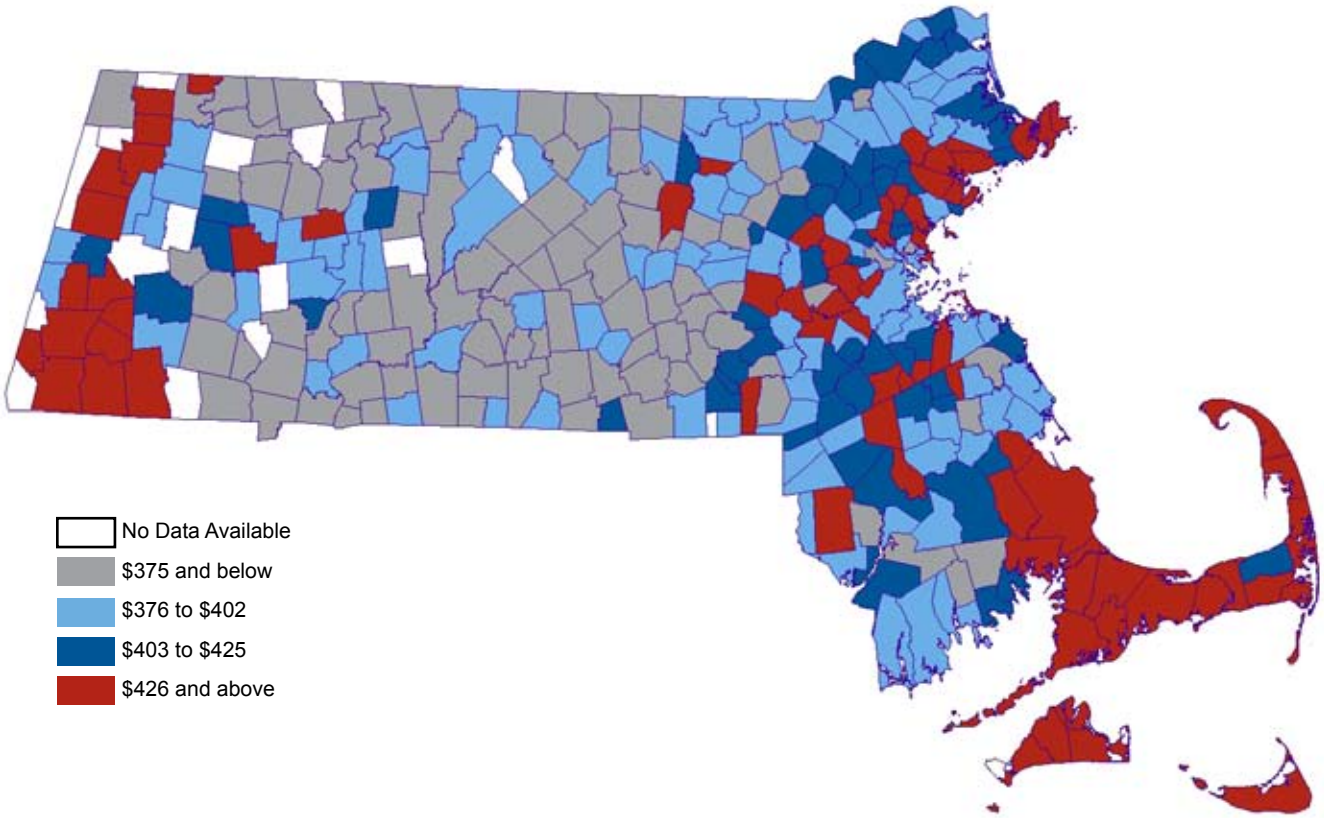


Section 3.2: Unadjusted TME by City

This section illustrates medical spending PMPM by city and town based on unadjusted data from all five payers included in this analysis. As such, the map below reflects actual medical spending but does not account for differences in populations such as age, which may influence health care needs. Data was available for 335 of the 351 cities and towns in Massachusetts.

As Figure G illustrates, unadjusted total medical expenses vary across the state. Spending was uniformly low across central Massachusetts, with TME below the statewide average of $403 PMPM in almost all cities and town located in the region. TME was uniformly higher in the eastern and far western portions of the state. Within eastern Massachusetts, the greatest medical spending PMPM was observed for Cape Cod, as well as in Boston-area suburbs. Higher spending for Cape Cod and western Massachusetts is likely a result of the older populations in those regions.

Figure G: Unadjusted Commercial TME by City

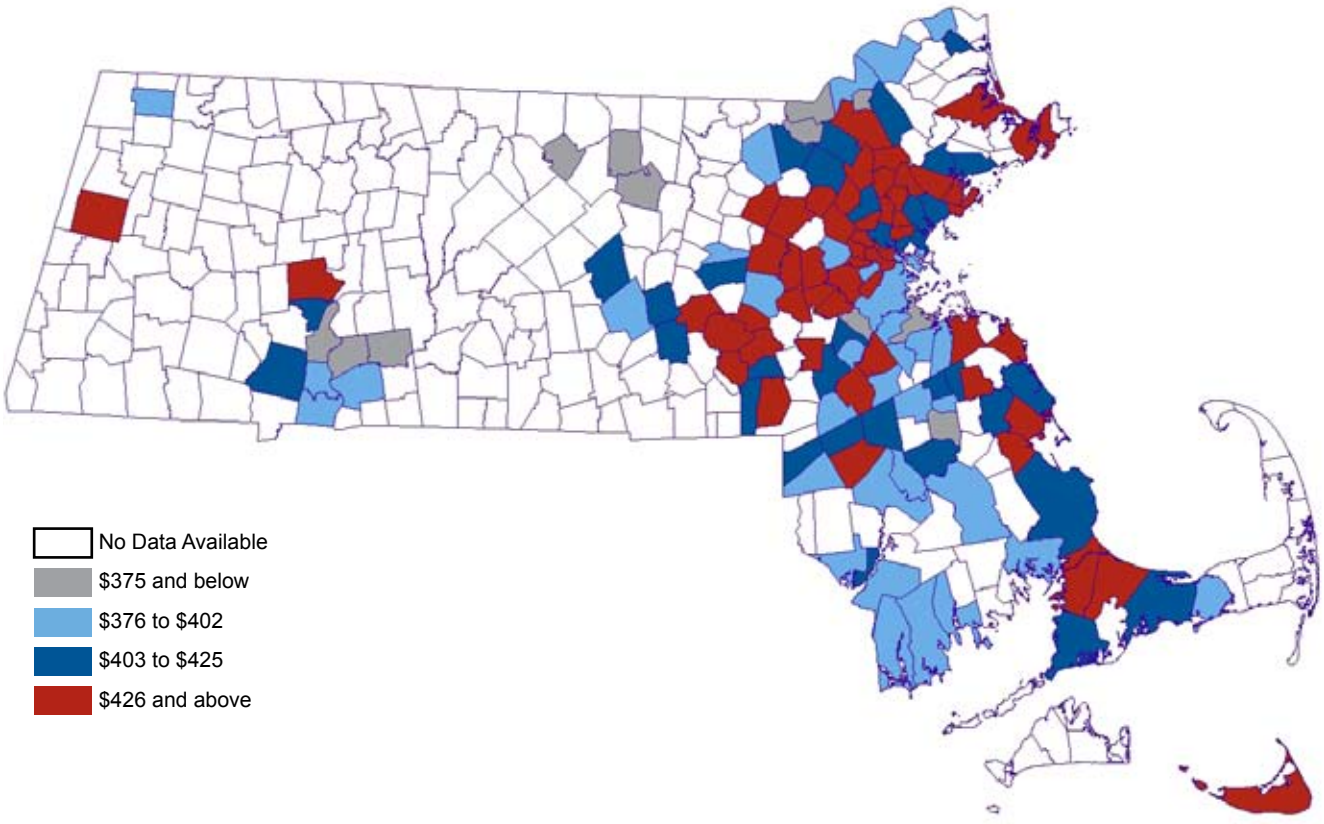


Section 3.3: Payer-Specific Health Status Adjusted TME by City

This section presents health status adjusted TME data for the three largest commercial payers analyzed by Massachusetts city or town.[14] Since payers utilize different health status adjustment tools and versions, TME comparisons cannot be made directly among payers. Data is based on self-reported member zip codes and does not necessarily reflect where the member received care.

For each payer, health status adjusted TME varied widely across Massachusetts cities and towns. For individual cities and towns with at least 3,000 members, health status adjusted TME varied by 60% for Blue Cross Blue Shield of Massachusetts (from a low of $305 in Holyoke to $489 in Watertown), 27% for Harvard Pilgrim Health Care (from a low of $353 in Lowell to $450 in Brookline), and 28% for Tufts Health Plan (from a low of $337 in Lowell to $431 in Newton).

Figure H: Blue Cross Blue Shield of Massachusetts Health Status Adjusted Commercial TME by City



[14] Only three payers, Blue Cross Blue Shield of Massachusetts, Harvard Pilgrim Health Care, and Tufts Health Plan, reported sufficient member volume to conduct city-level analyses.

Figure I: Harvard Pilgrim Health Care Health Status Adjusted Commercial TME by City

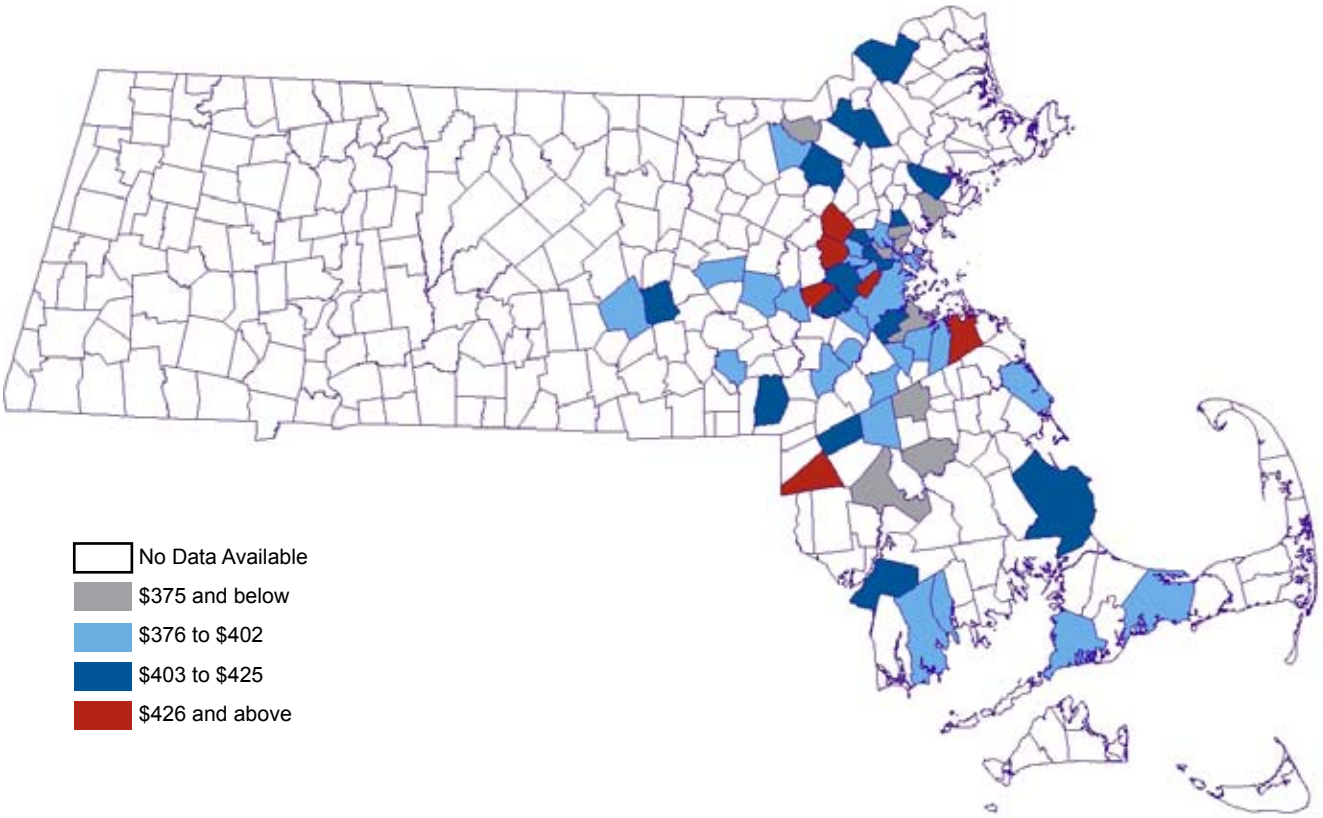
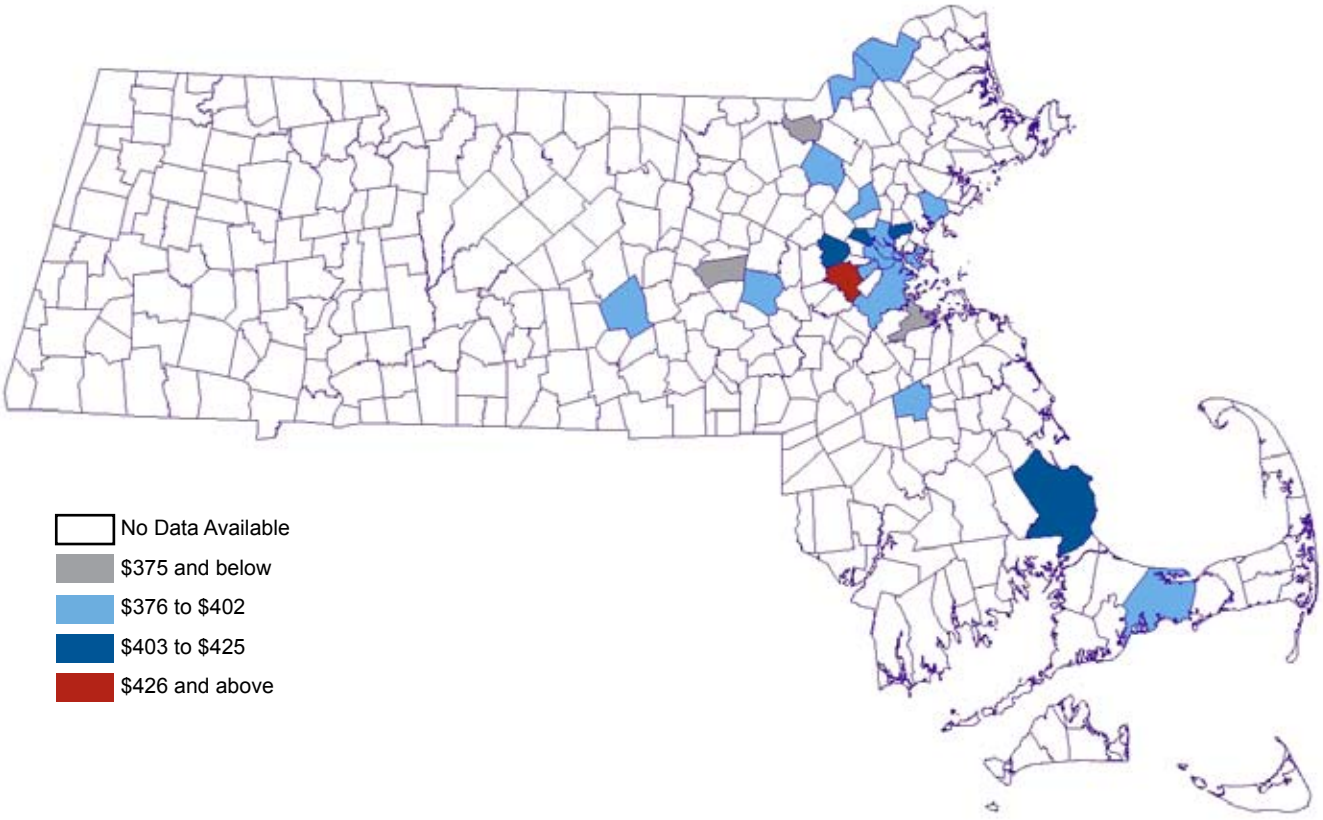


Figure J: Tufts Health Plan Health Status Adjusted Commercial TME by City

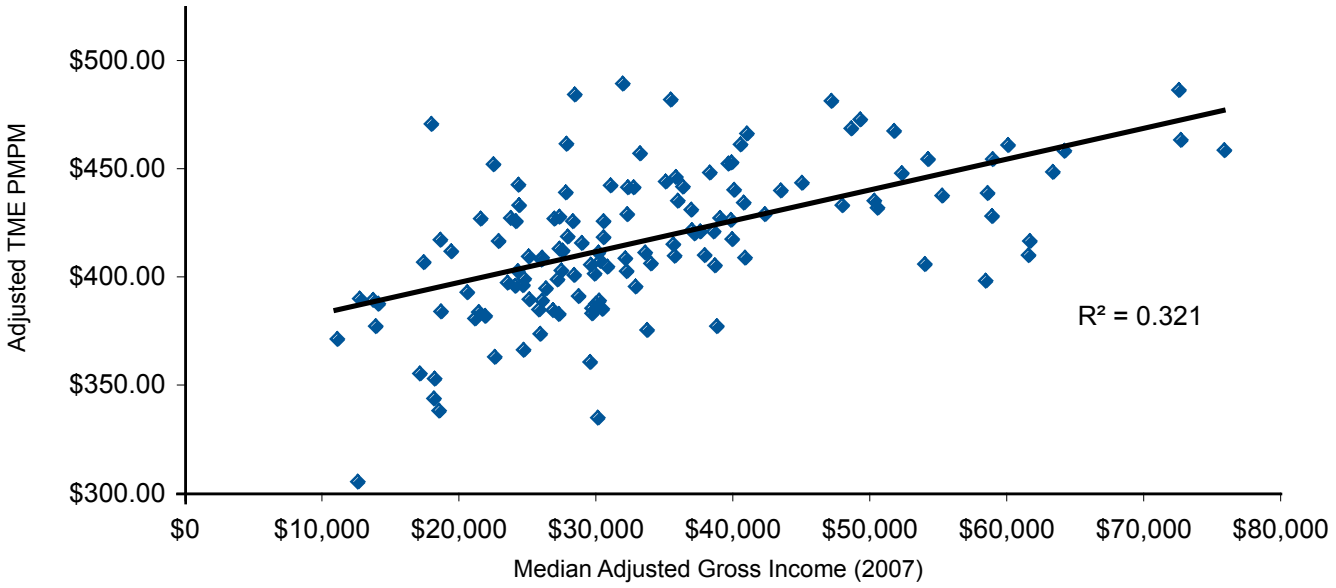


Section 3.4: TME by Median Adjusted Gross City Income

Research has shown that medical needs are correlated with income level, but that high-income individuals use more medical care than their low-income counterparts, irrespective of medical need, resulting in significant income-related inequality in medical expenditures.[15] This section presents an analysis of the correlation between health status adjusted total medical expenses and median adjusted gross income by city. Adjusted gross income data is derived from 2007 IRS tax filing information and city data is based on member self-reported zip code of residence. The analysis also compares medical spending patterns in the most and least affluent Massachusetts communities for one large commercial payer.

As shown in the scatter plots below, there is a correlation between average commercial TME for the residents of a city and the median income of that city. This analysis was conducted for Blue Cross Blue Shield of Massachusetts, Harvard Pilgrim Health Care, and Tufts Health Plan. For Blue Cross Blue Shield of Massachusetts, the analysis produced an R^2 of 0.321, indicating a moderate relationship. Harvard Pilgrim Health Care TME produced an almost identical R^2 of 0.322. The correlation for Tufts Health Plan was slightly lower, but still meaningful at R^2 equal to 0.277. It is important to note that this data does not include MassHealth and Commonwealth Care insurance products, which cover a significant number of individuals in lower income communities.

Figure K: Blue Cross Blue Shield of Massachusetts Health Status Adjusted TME and Median Adjusted Gross Income by City



[15] Willard G. Manning, Joseph P. Newhouse, Naihua Duan, Emmett B. Keeler and Arleen Leibowitz. (1987). *Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment*. The American Economic Review. Vol. 77, No. 3, pp. 251-277

Figure L: Harvard Pilgrim Health Care Health Status Adjusted TME and Median Adjusted Gross Income by City

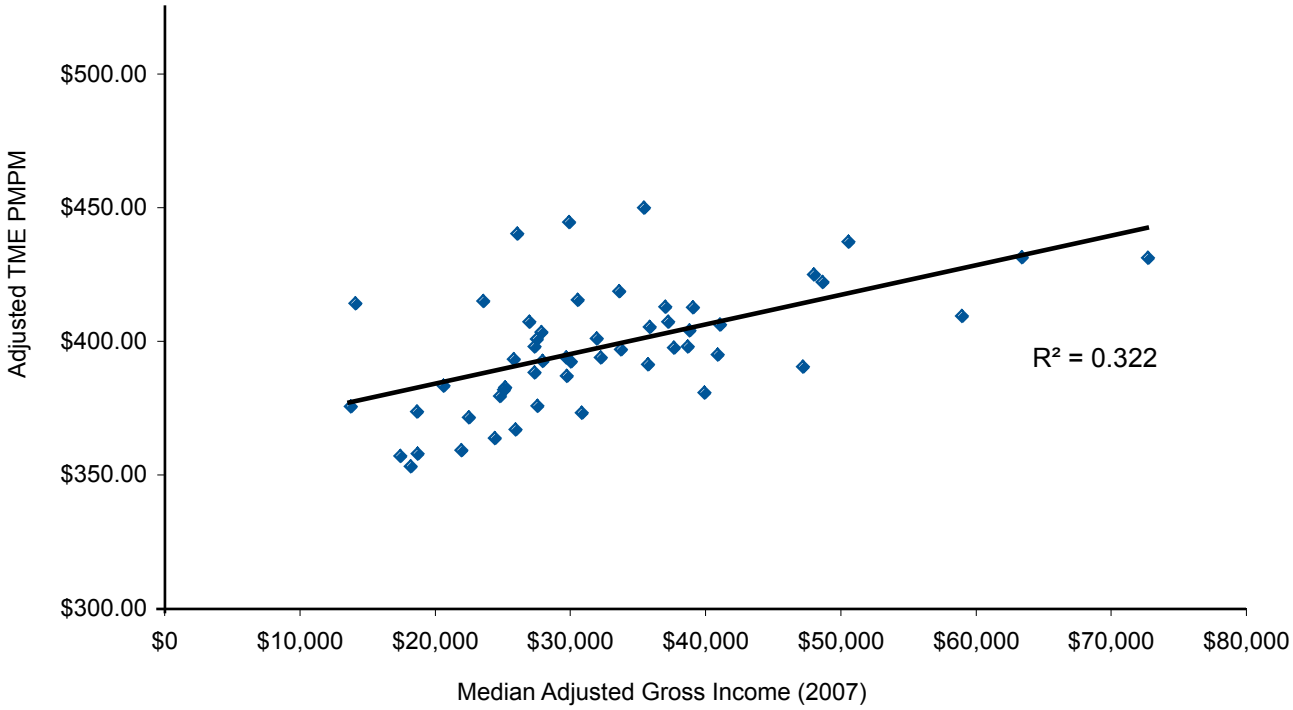


Figure M: Tufts Health Plan Health Status Adjusted TME and Median Adjusted Gross Income by City

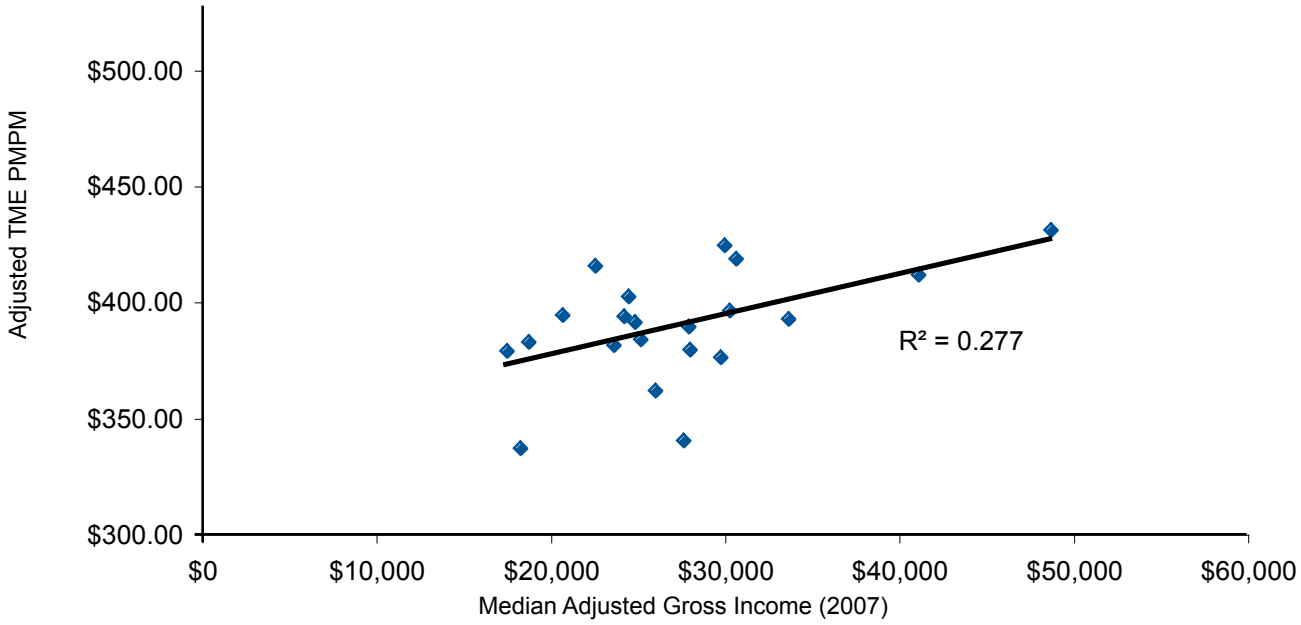
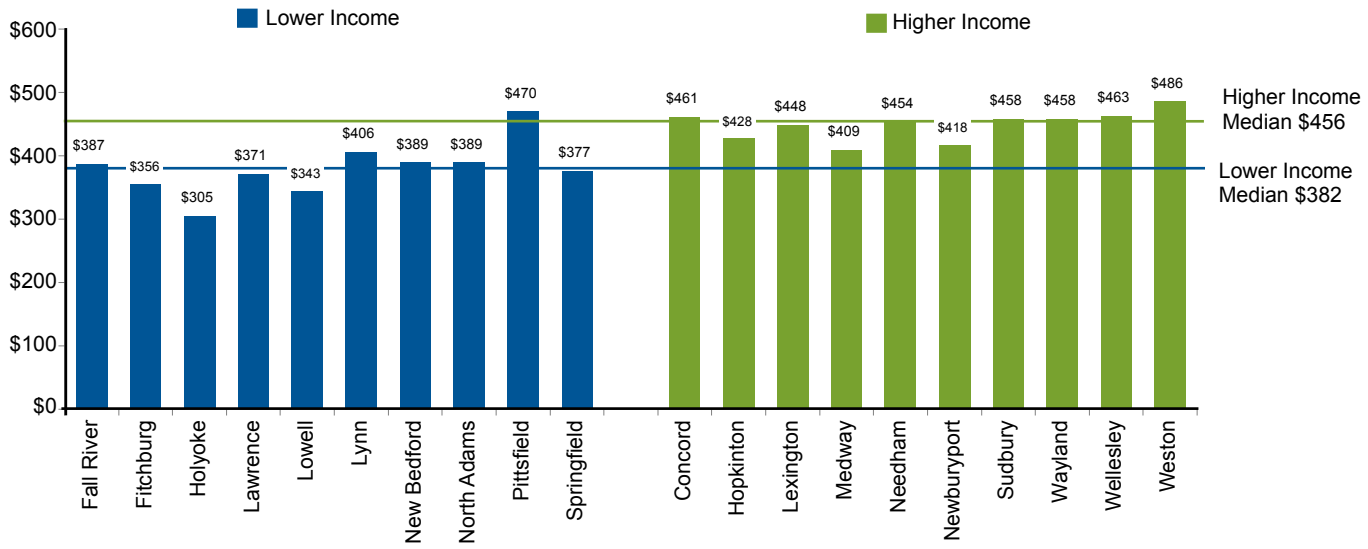


Figure N provides health status adjusted TME for Blue Cross Blue Shield of Massachusetts commercial members residing in the ten lowest and ten highest median income cities in Massachusetts reporting at least 3,000 covered lives. As groups, median total medical spending was significantly different for the most and least affluent cities identified, at $456 PMPM and $382 PMPM, respectively. Blue Cross Blue Shield of Massachusetts was used for this income analyses as it covers the largest number of members and therefore allows for the broadest analyses of medical spending by city and town. It should be noted that Blue Cross Blue Shield of Massachusetts reported greater variation in TME than other payers in this analysis. The difference in the TME of the highest and lowest income cities would be expected to be narrower for payers reporting less variation in TME.

Figure N: Blue Cross Blue Shield of Massachusetts Health Status Adjusted Commercial TME for Highest and Lowest Median Adjusted Gross Income Cities (PMPM)



Section 4: Physician Group Total Medical Expenses

Method: Physician groups were included in this analysis if they had at least 36,000 member months, the equivalent of 3,000 members, in managed care plans for a given payer over the reporting time period. Physician group reporting occurred at both the "parent" level and the "local" level. The "parent physician group" refers to the organizing entity which contracted as a single entity for its constituent local practice groups. Some parent physician groups did not contract as a single entity for their affiliated local practice groups; in such instances these groups are noted as "Independent Physicians Affiliated." In some cases, the parent physician group and the local practice group are the same because the physician group contracted with the payer individually. Pediatric physician groups and commercial partial claims data has been excluded from these analyses. The relativities presented in Section 4.4 were calculated by dividing payer-specific physician group health status adjusted TME by the payer's median health status adjusted TME for the groups analyzed. Section 4.5 utilizes reported member months to create an average relative TME for parent physician groups. TME is reported on a PMPM basis.

This section explores the variation in health status adjusted total medical expenses within the physician networks of the three largest payers, Blue Cross Blue Shield of Massachusetts, Harvard Pilgrim Health Care, and Tufts Health Plan. Physician group total medical expenses indicate the total medical spending of plan members under the care of a primary care provider associated with a particular group. This section then examines whether a given physician group does, or does not, have relatively higher or lower TME for different payers, the relationship of physician group TME to number of members managed by the group, and the distribution of managed care members across higher and lower TME physician groups.

In general, higher TME suggests more intensive use of resources, the use of more costly resources, or some combination thereof; while lower TME indicates less intensive and/or less costly use of resources. It is important to note that physician group TME includes all areas of medical spending, and includes the effect of factors, such as hospital prices, over which many groups have no control. Additionally, while health status adjustment allows for comparisons between the member populations of different physician groups, this adjustment is not perfect and may not fully account for variations in patient acuity across physician groups.

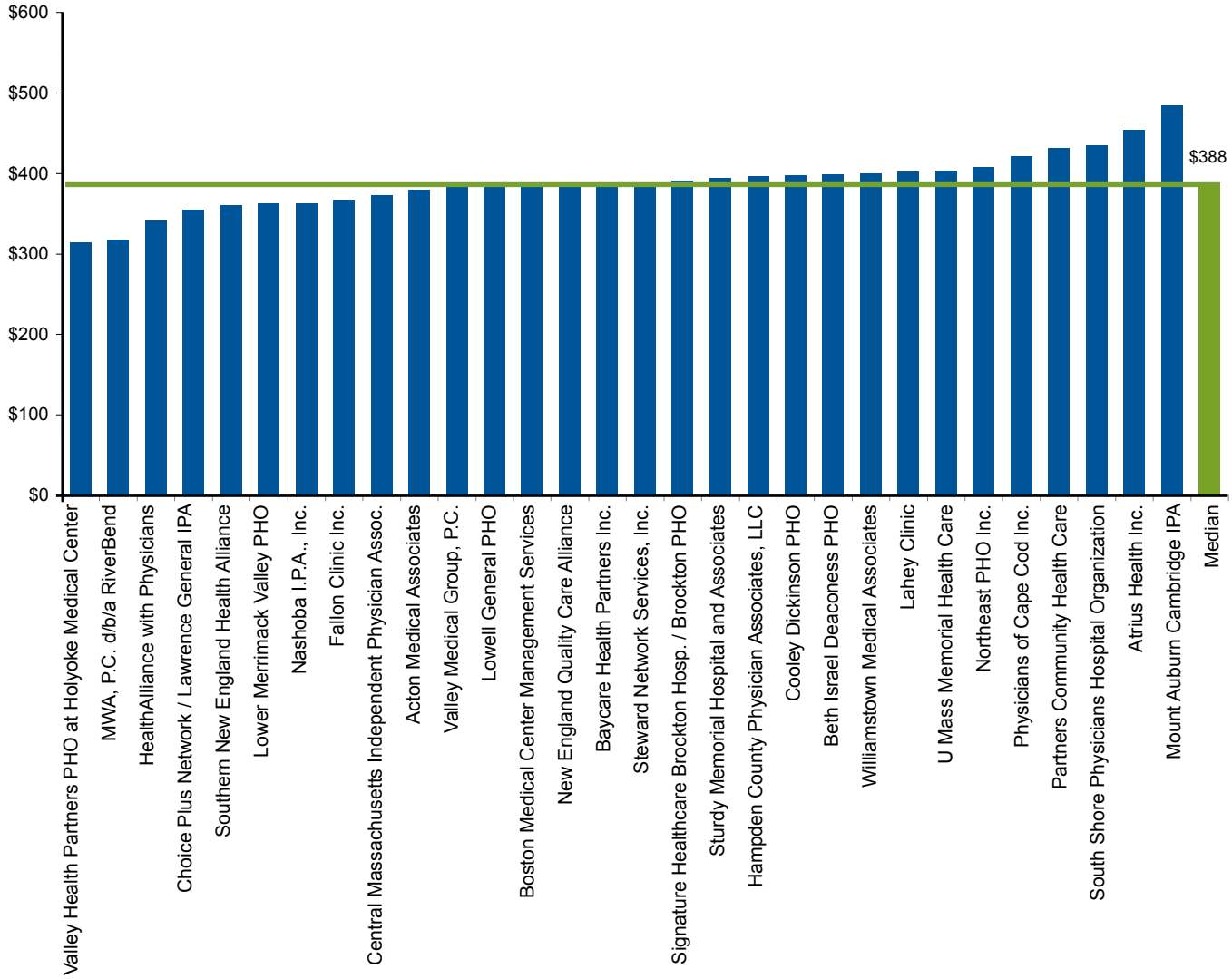
Major findings of these analyses include:

- Health status adjusted TME varied widely among physician groups, with a difference of 55% between physician groups in one payer's network.
- Several physician groups tended to have relatively high, or relatively low, TME regardless of payer. Physician groups with higher relative TME had higher spending in every category of expense, with the greatest differences in spending for hospital outpatient and physician services.
- The number of managed care members at a physician group does not appear to be correlated with the level of physician group TME on a PMPM basis. This suggests that member volume is not a contributing factor to TME.
- Two of the three largest payers had more than half of their managed care members at physician groups with health status adjusted TME above the median for all physician groups. This concentration of membership at physician groups with relatively high TME contributes to higher overall medical spending on a statewide level.

Section 4.1: Blue Cross Blue Shield of Massachusetts Parent and Local Practice Group Variation

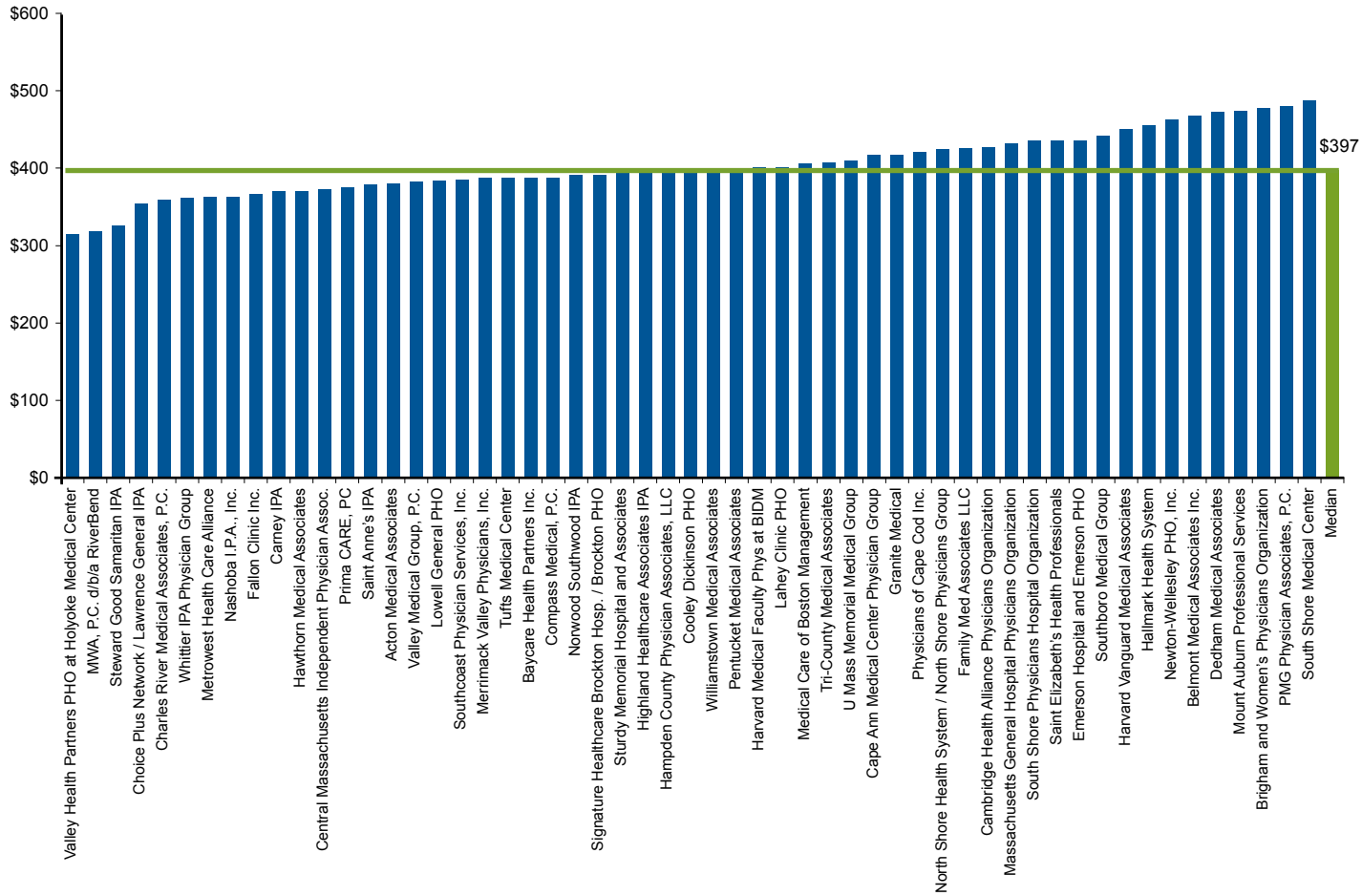
There was a 54% variation in health status adjusted TME for Blue Cross Blue Shield of Massachusetts managed care members across parent physician groups, with a low of $314 PMPM for members managed by Valley Health Partners PHO to a high of $485 PMPM for members managed by Mount Auburn Cambridge IPA. The median TME among the Blue Cross Blue Shield of Massachusetts parent physician groups analyzed was $388 PMPM.

Figure O: Blue Cross Blue Shield of Massachusetts Health Status Adjusted Commercial TME by Parent Physician Group



A similar percent variation existed in health status adjusted TME for local practice groups, with a range from $314 PMPM at Valley Health Partners PHO to $486 PMPM at South Shore Medical Center, or a variation of 55%.

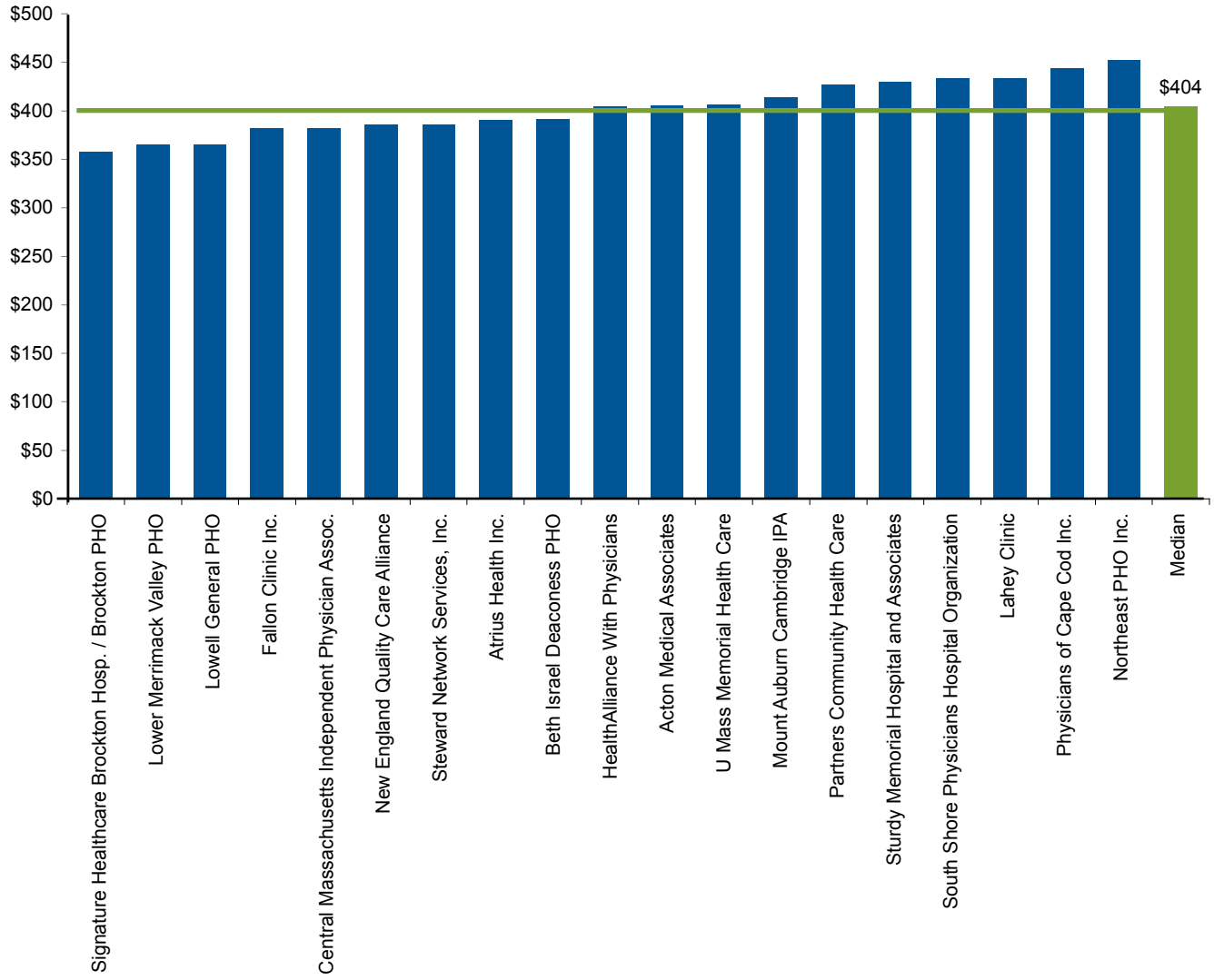
Figure P: Blue Cross Blue Shield of Massachusetts Health Status Adjusted Commercial TME by Local Physician Group



Section 4.2: Harvard Pilgrim Health Care Parent and Local Practice Group Variation

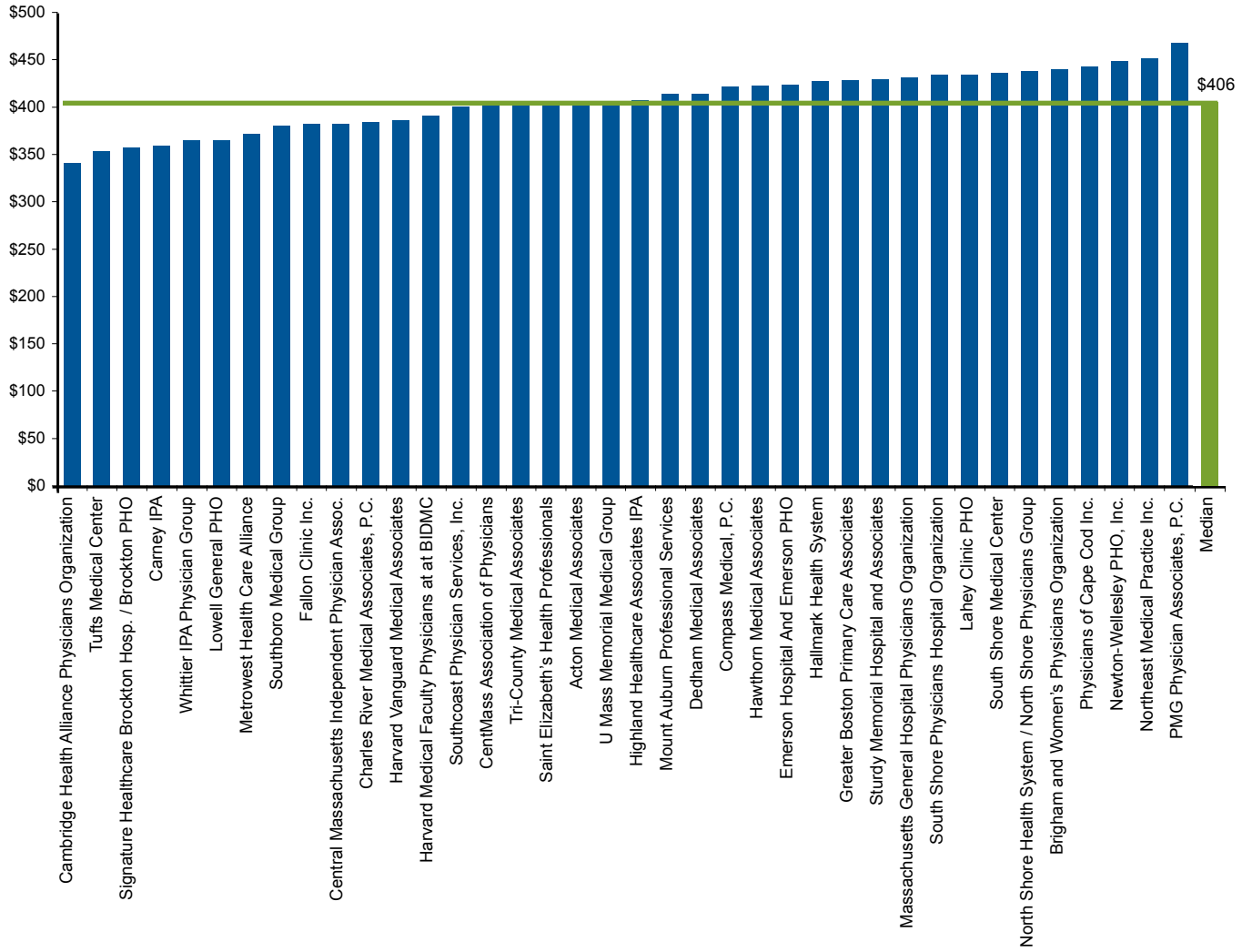
Health adjusted TME also varied significantly for Harvard Pilgrim Health Care managed care members, at both the parent group and local practice group level, although the percentage spread was somewhat lower than for Blue Cross Blue Shield of Massachusetts. For parent physician groups, the range in health status adjusted TME was $358 PMPM for members managed by Signature Healthcare Brockton to $457 PMPM for members managed by Northeast PHO Inc, a variation of 26%. The median physician group TME for Harvard Pilgrim Health Care's parent physician groups was $404 PMPM.

Figure Q: Harvard Pilgrim Health Care Health Status Adjusted Commercial TME by Parent Physician Group



At the local practice group level, TME ranged from $340 PMPM for members managed by Cambridge Health Alliance Physicians Organization to $467 PMPM for members managed by PMG Physician Associates, a difference of 37%. The median physician group TME for local practice groups with Harvard Pilgrim Health Care members was $406 PMPM, almost the same as the median parent physician group TME for Harvard Pilgrim Health Care members.

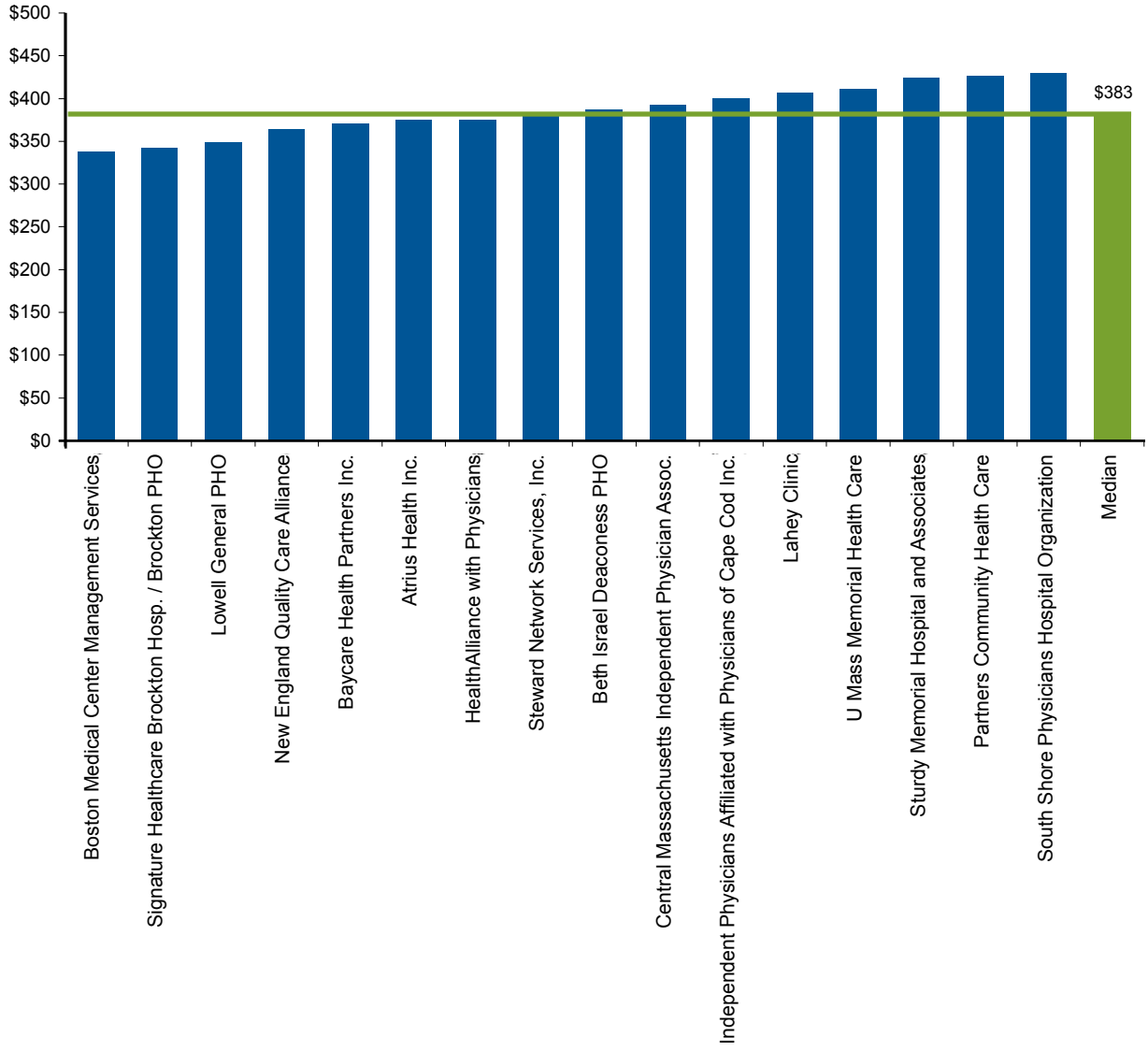
Figure R: Harvard Pilgrim Health Care Health Status Adjusted Commercial TME by Local Physician Group



Section 4.3: Tufts Health Plan Parent and Local Practice Group Variation

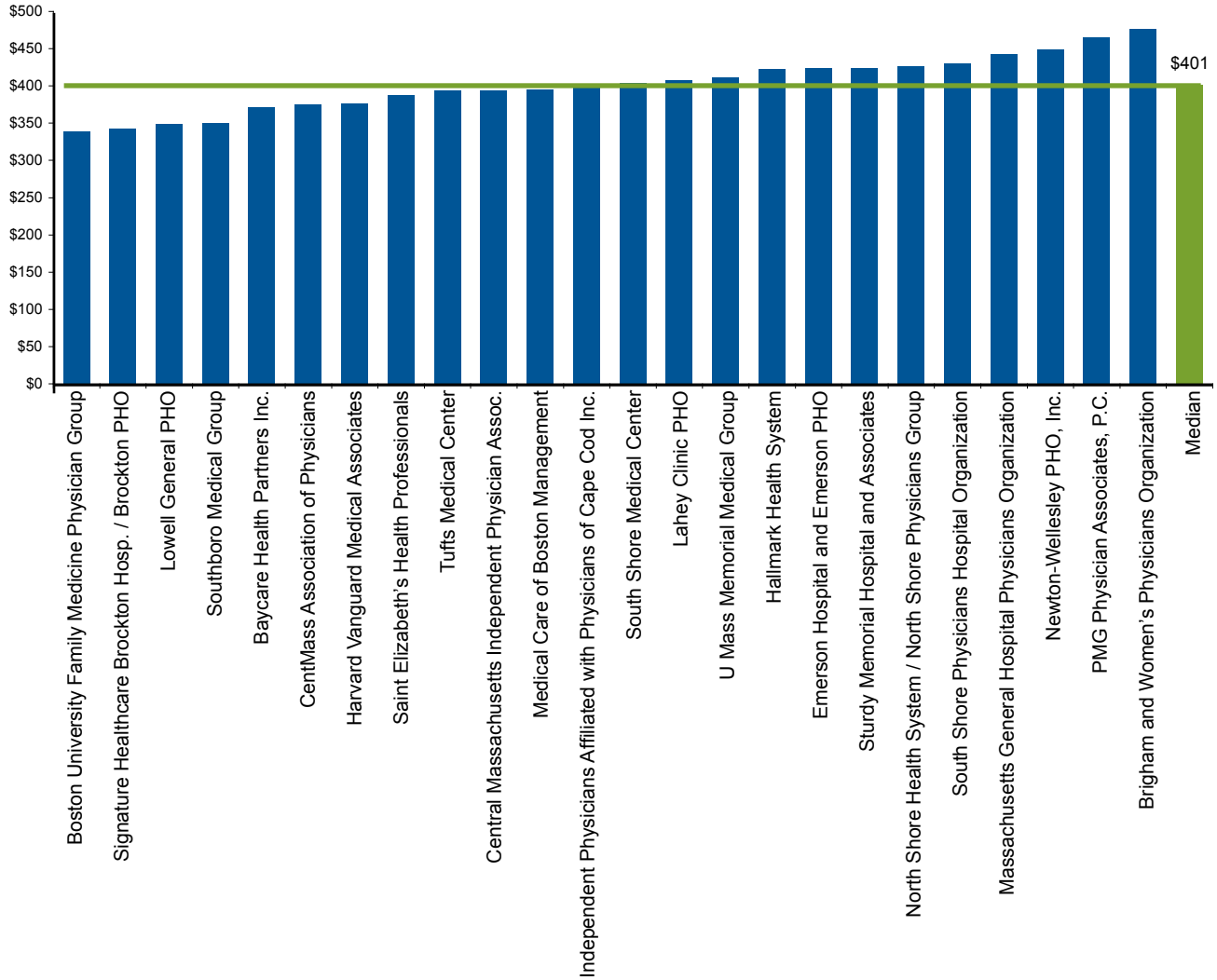
For Tufts Health Plan managed care members, the variation in parent physician group health status adjusted TME was 27%, ranging from $338 PMPM for members managed by Boston Medical Center Management Services to $430 PMPM for members managed by South Shore Physicians Hospital Organization. The median TME for physician parent groups for Tufts Health Plan's members was $383 PMPM.

Figure S: Tufts Health Plan Health Status Adjusted Commercial TME by Parent Physician Group



The range in TME at the local practice level was greater than at the parent physician group level, ranging from $338 PMPM for members managed by the Boston University Family Medicine Physician Group to $476 PMPM for members managed by Brigham and Women's Physician Organization, a difference of 41% between the highest and lowest reported local practice groups. Physician group median TME for local practice groups with Tufts Health Plan was $401 PMPM.

Figure T: Tufts Health Plan Health Status Adjusted Commercial TME by Local Physician Group



Section 4.4: Higher and Lower Trending TME Physician Groups

This analysis explores the extent to which individual physician groups tended to have relatively high, or relatively low, TME regardless of payer. Relative TME ratios were developed for each physician group by dividing a group's payer-specific health status adjusted TME by the payer's median health status adjusted TME for all physician groups in the analysis. These relativities can be compared across payers in order to discern whether a physician group had higher or lower TME across multiple payer networks. A value above 1.0 indicates that the physician group had health status adjusted TME above the payer's network median for the groups analyzed. A value below 1.0 indicates that the physician group had lower health status adjusted TME than the payer's network median for the groups analyzed.

The table below lists the parent physician groups for whom relative TME was either 1.0 and above or 1.0 and below for each payer that reported data for that group.[16] TME relativities for all parent physician groups reported for Blue Cross Blue Shield of Massachusetts, Harvard Pilgrim Health Care, and Tufts Health Plan meeting minimum size thresholds are listed in the Appendix. Of the 31 parent physician groups analyzed, eight groups had higher health status adjusted TME across payers, and nine had lower TME.

Table 2: Higher and Lower Commercial TME Parent Physician Groups Across Payer Networks

Higher Relative TME	Lower Relative TME
Lahey Clinic	Acton Medical Associates*
Mount Auburn Cambridge IPA	Baycare Health Partners Inc.*
Northeast PHO, Inc.	Boston Medical Center Management Services*
Partners Community Health Care	Fallon Clinic Inc.
Physicians of Cape Cod	HealthAlliance with Physicians*
South Shore Physicians Hospital Organization	Lower Merrimack Valley PHO
Sturdy Memorial Hospital and Associates	Lowell General PHO
U Mass Memorial Health Care	New England Quality Care Alliance*
	Steward Network Services, Inc.*

* Denotes physician group at 1.0 for at least one payer.

[16] Groups for which only one payer reported data are not included.

The table below lists the local physician practice groups with relative TME equal to or greater than 1.0 or equal to or less than 1.0 across all payers reporting data on that group.[17] Sixty physician local practice groups were analyzed, of which 15 providers had ratios at or above 1.0, indicating generally higher health status adjusted TME, and 13 had ratios at or below 1.0. The remainder of the physician local practice groups had a combination of higher relative ratios and lower relative ratios across payers. TME relativities for all physician local practice groups reported for Blue Cross Blue Shield of Massachusetts, Harvard Pilgrim Health Care, and Tufts Health Plan meeting minimum size thresholds are listed in the Appendix.

Table 3: Higher and Lower Commercial TME Physician Local Practice Groups Across Payer Networks

Higher Relative TME	Lower Relative TME
Brigham and Women's Physicians Organization	Acton Medical Associates*
Dedham Medical Associates	Baycare Health Partners Inc.
Emerson Hospital and Emerson PHO	Carney IPA
Hallmark Health System	CentMass Association of Physicians
Lahey Clinic PHO	Central Massachusetts Independent Physician Assoc.
Massachusetts General Hospital Physicians Organization	Charles River Medical Associates, P.C.
Mount Auburn Professional Services	Fallon Clinic Inc.
Newton-Wellesley PHO, Inc.	Lowell General PHO
North Shore Health System / North Shore Physicians Group	Metrowest Health Care Alliance
Physicians of Cape Cod	Signature Health Care Brockton
PMG Physician Associates, P.C.	Southcoast Physician Services, Inc.
South Shore Medical Center*	Tufts Medical Center
South Shore Physicians Hospital Organization	Whittier IPA Physician Group
Tri-County Medical Associates*	
U Mass Memorial Medical Group*	

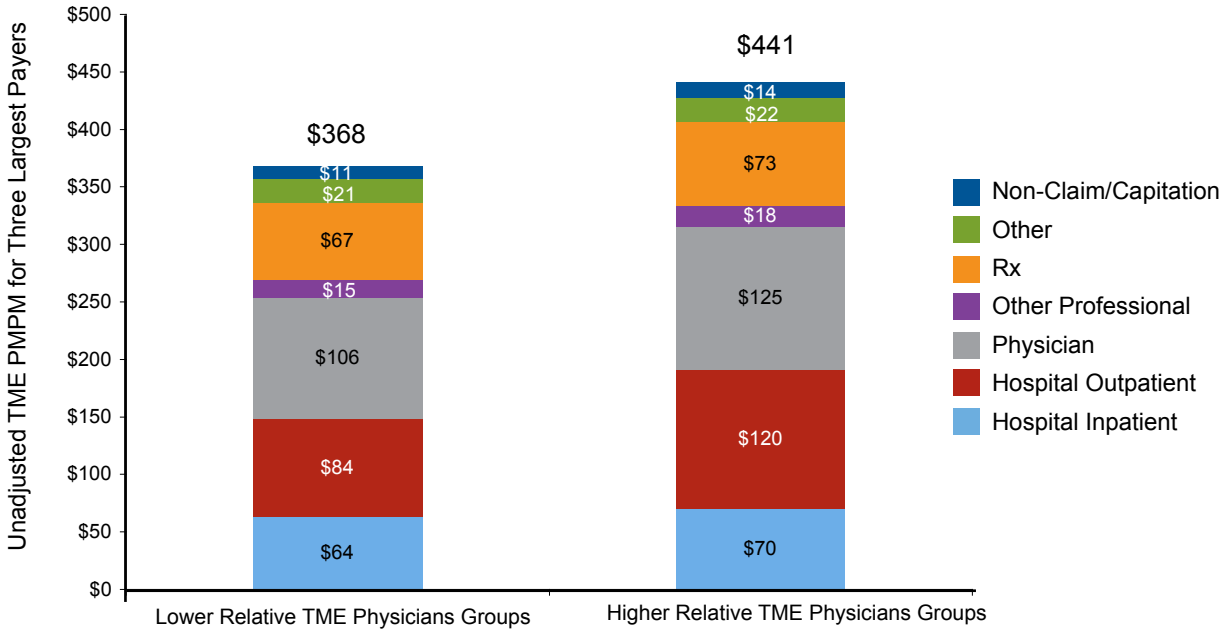
* Denotes physician group at 1.0 for at least one payer.

[17] Groups for which only one payer reported data are not included.

In order to understand the factors that might explain why some groups had lower or higher TME across payer networks, the service categories of TME were analyzed for these groups. Figure U shows the amount of medical expense PMPM by type of service. The analysis uses unadjusted TME to allow for aggregation of data submitted by all three payers.[18]

Unadjusted TME was $368 PMPM for members of the physician local practice groups identified as having lower TME across payer networks, compared to $441 PMPM for members of the groups identified as having higher TME, an overall spending difference of approximately 20%. Spending was higher for groups identified as higher relative TME in every category of expense, with the greatest differences in spending for hospital outpatient and physician services.[19] The difference in hospital outpatient spending was $36 PMPM, or 43% greater for higher relative TME practice groups than for lower relative TME practice groups. The difference in spending for physician services was $19 PMPM, or 18% greater for higher relative TME physician groups than for lower relative TME physician groups.

Figure U: Commercial TME Service Categories for Higher and Lower Relative Commercial TME Local Practice Groups Across Payer Networks



An analysis of the percent distribution of total TME by service category shows that the greatest area of difference in proportional spending between the two groups is for hospital outpatient services where spending accounts for $84 or 23% for groups with lower TME across payer networks and $120 or 27% for groups with higher TME across payer networks. The percent of total spending devoted to other types of service was similar.

[18] Due to the use of different health status adjustment tools, adjusted TME cannot be aggregated.

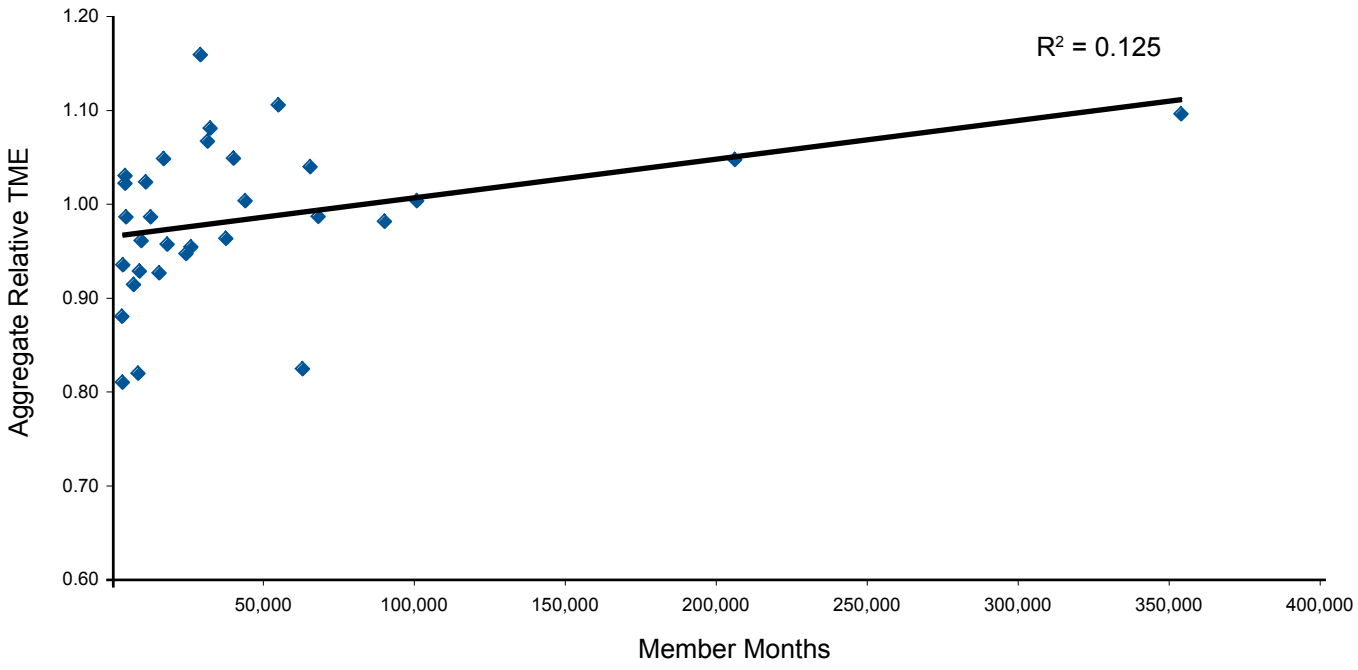
[19] DHCFP's *Trends in Health Expenditures* report found rapid growth in these service categories with growth in total spending for outpatient hospital care of 10% from 2007 to 2008, and 13% from 2008 to 2009; and spending growth for privately insured professional services of, on average, more than 10% per year from 2007 to 2009. Report available at: http://www.mass.gov/Eeohhs2/docs/dhcfp/cost_trend_docs/cost_trends_docs_2011/health_expenditures_report.pdf, accessed 6/19/2011.

Section 4.5: TME and Physician Group Member Volume

This section presents an analysis of the relationship between total medical expenses and the number of managed care members, measured in member months, at each physician group. This analysis required the development of an aggregate relative TME measure across payers. The aggregate relative TME was calculated using the relative health status adjusted TME of Blue Cross Blue Shield of Massachusetts, Harvard Pilgrim Health Care, and Tufts Health Plan.[20] The separate relativities were then weighted based on the number of member months reported by each of the relevant payers to create a single relativity. Total member months equal the sum of member months reported by the three payers included in the aggregation.

Figure V shows the relationship between aggregate relative TME and member months at the parent physician group level. Higher relativities indicate groups with TME greater than the median. As the figure indicates, there was minimal correlation between the total number of member months and total medical expenditures; suggesting that larger or smaller membership is not a significant factor in explaining the variation in TME at the parent group level.

Figure V: Parent Physician Group Aggregate Relative Commercial TME and Member Months

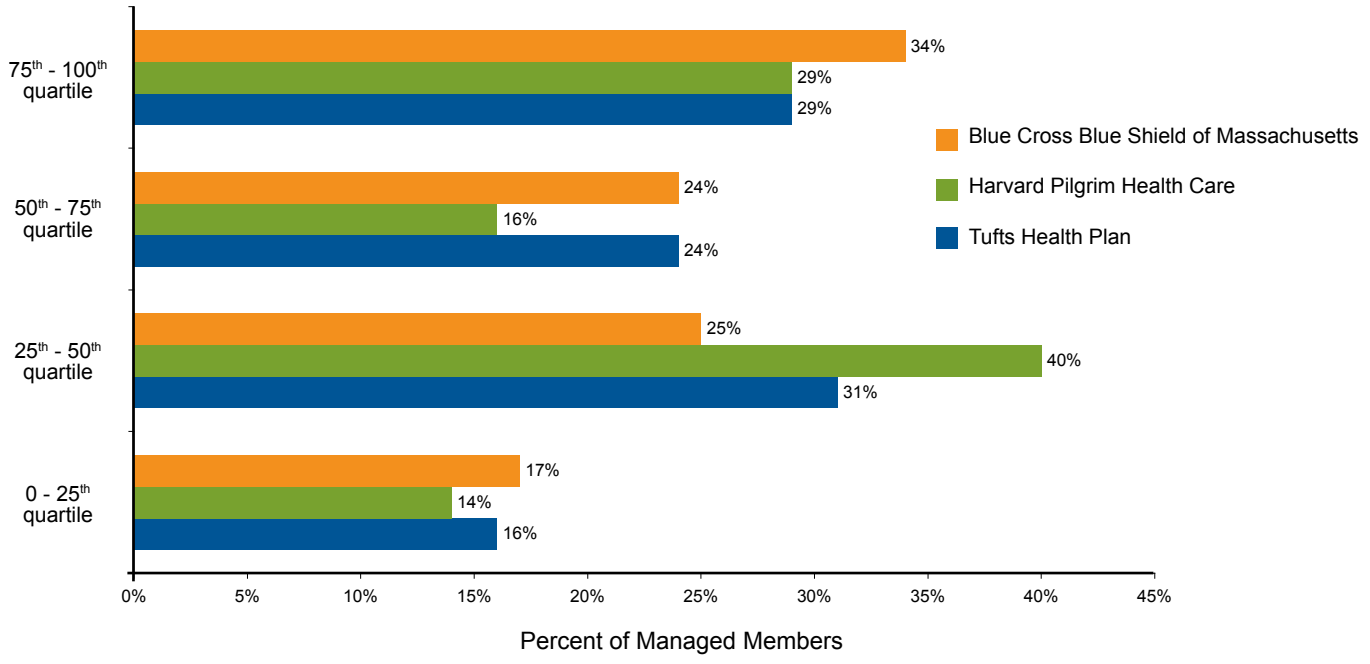


[20] These three payers are the only ones to report sufficient volume to analyze a meaningful set of physician groups.

Since there is variation in TME across physician groups, total medical spending in aggregate is affected by the distribution of membership by physician groups. Figure W shows the distribution of managed care members by physician local practice group, based on the ranking of the group in terms of health status adjusted TME. Each physician group is ranked by quartile. The 75th-100th quartile includes local practice groups that had the highest health status adjusted TME within each payer's network, while the 0-25th quartile represents local practice groups that had the lowest reported health status adjusted TME within the payer network. The figure shows the percent of each payer's managed care members that receive care from local practice groups in each quartile.

Thirty-four percent of managed care members of Blue Cross Blue Shield of Massachusetts received care from local practice groups that ranked in the top quartile of physician group TME; and nearly 60% of its members were associated with physician groups in the top two TME quartiles. Tufts Health Plan also had more than half, 53%, of its managed care members in local practice groups that have TME above the median. Harvard Pilgrim Health Care had only 45% of members receiving care from physician groups in the top two quartiles. For all three payers, local physician groups in the lowest quartile had the smaller proportion of members, ranging from 14% at Harvard Pilgrim Health Care to 17% at Blue Cross Blue Shield of Massachusetts.

Figure W: Distribution of Member Volume by Physician Local Practice Group Commercial TME



Conclusion

These baseline analyses suggest that total medical expense is potentially a useful measure for understanding and monitoring health care spending in Massachusetts. The variation in TME identified across geographic regions and primary care physician local practice groups suggest that there are opportunities to reduce health care spending in the Commonwealth. It is critical that Massachusetts health care stakeholders identify factors that cause variation in medical expenses and implement effective strategies to moderate spending.

Appendix

General Definitions

Health Status Adjustment Score. A value that measures a member's illness burden and predicted resource use based on differences in member characteristics or other risk factors.

Health Status Adjusted Total Medical Expenses. The total cost of care for the member population associated with a provider group based on allowed claims for all categories of medical expenses and all non-claims related payments to providers, adjusted by health status, and expressed on a Per Member Per Month basis, as calculated under 114.5 CMR 23.04.

Member Months. The number of members participating in a plan over the specified period of time expressed in months of membership.

Per Member Per Month (PMPM). An adjustment made by dividing an amount by Member Months.

Physician Parent Group. A medical practice comprised of two or more physicians organized to provide member care services (regardless of its legal form or ownership).

Physician Local Practice Group. A geographically organized subgroup of a Physician Parent Group that provides primary care.

Definitions for Total Medical Expenses (TME) Service Categories

Hospital Inpatient. All payments made by the payer to hospitals for inpatient services generated from claims. Includes all room and board and ancillary payments. Includes all hospital types. Includes payments for emergency room services when the member is admitted to the hospital, in accordance with the specific payer's payment rules. Does not include payments made for observation services. Does not include payments made for physician services provided during an inpatient stay that have been billed directly by a physician group practice or an individual physician. Does not include inpatient services at non-hospital facilities.

Hospital Outpatient. All payments to hospitals for outpatient services generated from claims. Includes all hospital types and includes payments made for hospital-licensed satellite clinics. Includes emergency room services not resulting in admittance. Includes observation services. Does not include payments made for physician services provided on an outpatient basis that have been billed directly by a physician group practice or an individual physician.

Physician. All payments to physicians or physician group practices generated from claims. Includes services provided by a doctor of medicine or osteopathy

Other Professional. All payments generated from claims to health care providers for services provided by a licensed practitioner other than a physician. This includes, but is not limited to, community health center services, freestanding ambulatory surgical center services, licensed podiatrists, nurse practitioners, physician assistants, physical therapists, occupational therapists, speech therapists, psychologists, licensed clinical social workers, counselors, dieticians, dentists, and chiropractors.

Rx. All payments generated from claims to health care providers for prescription drugs, biological products, or vaccines as defined by the payer's prescription drug benefit.

Other. All payments generated from claims to health care providers for medical services not otherwise included in other categories. Includes, but is not limited to, skilled nursing facility services, home health services, durable medical equipment, freestanding diagnostic facility services, hearing aid services and optical services. Payments made to members for direct reimbursement of medical services may be reported in "Claims: other" if the payer is unable to classify the service. However, payments to members for non-medical services, such as fitness club reimbursements, are not allowable medical expenses and should not be reported in any category.

Non-Claims/Capitation. All other payments made to providers not directly related to a medical claim including, but not limited to, pay for performance, care management payments, infrastructure payments, grants, surplus payments, lump sum settlements, capitation settlements, signing bonuses, governmental payer shortfall payments, infrastructure, medical director, and health information technology payments.

Blue Cross Blue Shield of Massachusetts: Summary Data

Blue Cross Blue Shield of Massachusetts is the largest payer in this analysis, accounting for slightly over 50% of the analyzed commercial full claims enrollment.

Blue Cross Blue Shield of Massachusetts reported using DxCG version 6.0.1 to conduct its health status adjustment. TME should not be compared between payers as health status and other calculation variables may differ.

Insurance Category	Member Months	Normalized Health Status Adjusted TME (PMPM)	Managed Normalized Health Status Adjusted TME (PMPM)	Non-Managed Normalized Health Status Adjusted TME (PMPM)	% Managed Care	% Non-Managed Care
Commercial full claims	14,527,715	$412	$424	$381	75%	25%
Commercial partial claims	5,837,058	N/A	N/A	N/A	47%	53%
Medicaid managed care organization (MCO)	--	--	--	--	--	--
Medicare managed care organization (MCO)	401,409	$1,021	$1,019	N/A	97%	3%
Total	**20,766,182**	**N/A**	**N/A**	**N/A**	**68%**	**32%**

Fallon Community Health Plan: Summary Data

Fallon Community Health Plan reported using VeriskHealth Risk Smart version 2.3 to conduct its health status adjustment. TME should not be compared between payers as health status and other calculation variables may differ.

Insurance Category	Member Months	Normalized Health Status Adjusted TME (PMPM)	Managed Normalized Health Status Adjusted TME (PMPM)	Non-Managed Normalized Health Status Adjusted TME (PMPM)	% Managed Care	% Non-Managed Care
Commercial full claims	1,543,031	$361	$356	N/A	97%	3%
Commercial partial claims	189,074	N/A	N/A	N/A	100%	0%
Medicaid managed care organization (MCO)	258,219	$398	$398	N/A	100%	0%
Medicare managed care organization (MCO)	365,846	$1,051	$1,051	N/A	100%	0%
Total	**2,356,170**	**N/A**	**N/A**	**N/A**	**98%**	**2%**

Harvard Pilgrim Health Care: Summary Data

Harvard Pilgrim Health Care reported using DxCG version 3.03 to conduct its health status adjustment for the commercial population and CMS HHC Risk Model 2010 for the Medicare population. TME should not be compared between payers as health status and other calculation variables may differ.

Insurance Category	Member Months	Normalized Health Status Adjusted TME (PMPM)	Managed Normalized Health Status Adjusted TME (PMPM)	Non-Managed Normalized Health Status Adjusted TME (PMPM)	% Managed Care	% Non-Managed Care
Commercial full claims	7,120,416	$398	$405	$372	81%	19%
Commercial partial claims	375,924	N/A	N/A	N/A	0%	100%
Medicaid managed care organization (MCO)	--	--	--	--	--	--
Medicare managed care organization (MCO)	268,605	$1,026	N/A	$1,026	0%	100%
Total	**7,764,945**	**N/A**	**N/A**	**N/A**	**74%**	**26%**

Neighborhood Health Plan: Summary Data

Neighborhood Health Plan provided data for its Medicaid managed care organization as well as managed commercial business.

Neighborhood Health Plan reported using DxCG Risk Smart version 2.3.1 to conduct its health status adjustment. TME should not be compared between payers as health status and other calculation variables may differ.

Insurance Category	Member Months	Normalized Health Status Adjusted TME (PMPM)	Managed Normalized Health Status Adjusted TME (PMPM)	Non-Managed Normalized Health Status Adjusted TME (PMPM)	% Managed Care	% Non-Managed Care
Commercial full claims	339,950	$356	$356	N/A	100%	0%
Commercial partial claims	--	--	--	--	--	--
Medicaid managed care organization (MCO)	1,987,187	$394	$394	N/A	100%	0%
Medicare managed care organization (MCO)	--	--	--	--	--	--
Total	**2,327,137**	**N/A**	**N/A**	**N/A**	**100%**	**0%**

Tufts Health Plan: Summary Data

Tufts Health Plan provided the largest portion of Medicare MCO data.

Tufts Health Plan reported using DxCG version 2.2 to conduct its health status adjustment. TME should not be compared between payers as health status and other calculation variables may differ.

Insurance Category	Member Months	Normalized Health Status Adjusted TME (PMPM)	Managed Normalized Health Status Adjusted TME (PMPM)	Non-Managed Normalized Health Status Adjusted TME (PMPM)	% Managed Care	% Non-Managed Care
Commercial full claims	4,126,576	$397	$396	$401	87%	13%
Commercial partial claims	1,554,933	N/A	N/A	N/A	35%	65%
Medicaid managed care organization (MCO)	--	--	--	--	--	--
Medicare managed care organization (MCO)	889,178	$963	$963	N/A	100%	0%
Total	**6,570,687**	**N/A**	**N/A**	**N/A**	**77%**	**23%**

Table A1: Health Status Adjusted TME (PMPM) by Massachusetts City*

(continued on next page)

City	Blue Cross Blue Shield of Massachusetts	Harvard Pilgrim Health Care	Tufts Health Plan
Abington	$405	N/A	N/A
Acton	$437	N/A	N/A
Agawam	$394	N/A	N/A
Amesbury	$390	N/A	N/A
Andover	$433	$425	N/A
Arlington	$466	$406	$412
Ashland	$428	N/A	N/A
Attleboro	$389	$440	N/A
Barnstable	$409	$382	$384
Bedford	$467	N/A	N/A
Bellingham	$408	N/A	N/A
Belmont	$481	$390	N/A
Beverly	$415	N/A	N/A
Billerica	$411	$418	$393
Boston	$399	$379	$391
Bourne	$439	N/A	N/A
Braintree	$402	$394	N/A
Bridgewater	$404	$373	N/A
Brockton	$384	$358	$383
Brookline	$482	$450	N/A
Burlington	$441	N/A	N/A
Cambridge	$461	$403	$389
Canton	$431	N/A	N/A
Chelmsford	$408	$395	N/A
Chicopee	$352	N/A	N/A
Concord	$461	N/A	N/A
Danvers	$407	N/A	N/A
Dartmouth	$384	$393	N/A
Dedham	$375	$397	N/A
Dracut	$360	N/A	N/A
Duxbury	$448	N/A	N/A
East Bridgewater	$334	N/A	N/A
Easthampton	$425	N/A	N/A
Easton	$420	$397	N/A
Everett	$417	$373	N/A
Fairhaven	$402	N/A	N/A

*Only cities in which a payer reported at least 3,000 members are listed.

Table A1: Health Status Adjusted TME (PMPM) by Massachusetts City*
(continued from previous page)

City	Blue Cross Blue Shield of Massachusetts	Harvard Pilgrim Health Care	Tufts Health Plan
Fall River	$387	$414	N/A
Falmouth	$413	$398	N/A
Fitchburg	$355	N/A	N/A
Foxborough	$395	N/A	N/A
Framingham	$385	$394	$376
Franklin	$427	$412	N/A
Gardner	$338	N/A	N/A
Gloucester	$442	N/A	N/A
Grafton	$410	N/A	N/A
Hanover	$448	N/A	N/A
Haverhill	$397	$415	$381
Hingham	$432	$437	N/A
Holden	$417	N/A	N/A
Holliston	$434	N/A	N/A
Holyoke	$305	N/A	N/A
Hopkinton	$428	N/A	N/A
Hudson	$385	N/A	N/A
Ipswich	$441	N/A	N/A
Kingston	$442	N/A	N/A
Lawrence	$371	N/A	N/A
Leominster	$362	N/A	N/A
Lexington	$448	$431	N/A
Lowell	$343	$353	$337
Ludlow	$366	N/A	N/A
Lynn	$406	$357	$379
Lynnfield	$443	N/A	N/A
Malden	$452	$371	$415
Mansfield	$419	$407	N/A
Marblehead	$472	N/A	N/A
Marlborough	$412	$376	$340
Marshfield	$409	$391	N/A
Medfield	$454	N/A	N/A
Medford	$418	$392	$379
Medway	$409	N/A	N/A
Melrose	$446	$405	N/A
Methuen	$395	N/A	$394
Middleborough	$382	N/A	N/A

*Only cities in which a payer reported at least 3,000 members are listed.

Table A1: Health Status Adjusted TME (PMPM) by Massachusetts City*
(continued from previous page)

City	Blue Cross Blue Shield of Massachusetts	Harvard Pilgrim Health Care	Tufts Health Plan
Milford	$427	$388	N/A
Milton	$377	$404	N/A
Nantucket	$484	N/A	N/A
Natick	$453	$380	N/A
Needham	$454	$409	N/A
New Bedford	$389	$375	N/A
Newburyport	$416	N/A	N/A
Newton	$468	$422	$431
North Adams	$389	N/A	N/A
North Andover	$420	N/A	N/A
North Attleborough	$418	N/A	N/A
North Reading	$440	N/A	N/A
Northampton	$426	N/A	N/A
Norton	$441	N/A	N/A
Norwood	$387	$392	N/A
Peabody	$426	$407	N/A
Pembroke	$406	N/A	N/A
Pittsfield	$470	N/A	N/A
Plymouth	$425	$415	$418
Quincy	$373	$367	$362
Randolph	$389	$382	N/A
Raynham	$388	N/A	N/A
Reading	$439	N/A	N/A
Revere	$411	N/A	N/A
Rockland	$408	N/A	N/A
Salem	$427	N/A	N/A
Sandwich	$428	N/A	N/A
Saugus	$425	N/A	N/A
Scituate	$426	N/A	N/A
Sharon	$435	N/A	N/A
Shrewsbury	$421	$413	N/A
Somerset	$408	N/A	N/A
Somerville	$433	$363	$402
Springfield	$377	N/A	N/A
Stoneham	$457	N/A	N/A
Stoughton	$402	$400	N/A
Sudbury	$458	N/A	N/A
Swampscott	$461	N/A	N/A

*Only cities in which a payer reported at least 3,000 members are listed.

Table A1: Health Status Adjusted TME (PMPM) by Massachusetts City*
(continued from previous page)

City	Blue Cross Blue Shield of Massachusetts	Harvard Pilgrim Health Care	Tufts Health Plan
Swansea	$398	N/A	N/A
Taunton	$381	$359	N/A
Tewksbury	$414	N/A	N/A
Wakefield	$443	N/A	N/A
Walpole	$405	$398	N/A
Waltham	$401	$444	$424
Wareham	$383	N/A	N/A
Watertown	$489	$401	N/A
Wayland	$458	N/A	N/A
Wellesley	$463	$431	N/A
West Springfield	$380	N/A	N/A
Westborough	$452	N/A	N/A
Westfield	$416	N/A	N/A
Westford	$398	N/A	N/A
Weston	$486	N/A	N/A
Westport	$384	N/A	N/A
Westwood	$406	N/A	N/A
Weymouth	$383	$387	N/A
Whitman	$400	N/A	N/A
Wilmington	$435	N/A	N/A
Winchester	$438	N/A	N/A
Woburn	$411	N/A	$396
Worcester	$392	$383	$394
Yarmouth	$396	N/A	N/A

*Only cities in which a payer reported at least 3,000 members are listed.

Table A2: Parent Physician Group Relative TME by Payer

Parent Physician Group	Blue Cross Blue Shield of Massachusetts	Harvard Pilgrim Health Care	Tufts Health Plan
Acton Medical Associates	0.98	1.00	--
Atrius Health Inc.	1.17	0.97	0.98
Baycare Health Partners Inc.	1.00	--	0.97
Beth Israel Deaconess PHO	1.03	0.97	1.01
Boston Medical Center Management Services	1.00	--	0.88
Central Massachusetts Independent Physician Assoc.	0.96	0.94	1.03
Choice Plus Network/Lawrence General IPA	0.91	--	--
Cooley Dickinson PHO	1.02	--	--
Fallon Clinic Inc.	0.95	0.94	--
Hampden County Physician Associates, LLC	1.02	--	--
HealthAlliance with Physicians	0.88	1.00	0.98
Independent Physicians Affiliated with Physicians of Cape Cod Inc.	--	--	1.04
Lahey Clinic	1.03	1.07	1.06
Lower Merrimack Valley PHO	0.93	0.90	--
Lowell General PHO	0.99	0.90	0.91
Mount Auburn Cambridge IPA	1.25	1.02	--
MWA, P.C. d/b/a RiverBend	0.82	--	--
Nashoba I.P.A., Inc.	0.93	--	--
New England Quality Care Alliance	1.00	0.95	0.95
Northeast PHO Inc.	1.05	1.12	--
Partners Community Health Care	1.11	1.06	1.11
Physicians of Cape Cod Inc.	1.09	1.10	--
Signature Healthcare Brockton Hosp/Brockton PHO	1.01	0.88	0.89
South Shore Physicians Hospital Organization	1.12	1.07	1.12
Southern New England Health Alliance	0.93	--	--
Steward Network Services, Inc.	1.00	0.96	0.99
Sturdy Memorial Hospital & Associates	1.02	1.06	1.11
U Mass Memorial Health Care	1.04	1.01	1.07
Valley Health Partners PHO at Holyoke Medical Center	0.81	--	--
Valley Medical Group, P.C.	0.99	--	--
Williamstown Medical Associates	1.03	--	--

Table A3: Local Physician Group Relative Total Medical Expense Ratios
(continued on next page)

Physician Local Practice Group	Blue Cross Blue Shield	Harvard Pilgrim Health Care	Tufts Health Plan
Acton Medical Associates	0.95	1.00	--
Baycare Health Partners Inc.	0.98	--	0.92
Belmont Medical Associates Inc.	1.18	--	--
Brigham and Women's Physicians Organization	1.20	1.08	1.19
Boston University Family Medicine Physician Group	--	--	0.84
Cambridge Health Alliance Physicians Organization	1.07	0.84	--
Cape Ann Medical Center Physician Group	1.05	--	--
Carney IPA	0.93	0.88	--
CentMass Association of Physicians	--	0.99	0.93
Central Massachusetts Independent Physician Assoc.	0.94	0.94	0.98
Charles River Medical Associates, P.C.	0.90	0.95	--
Choice Plus Network/Lawrence General IPA	0.89	--	--
Compass Medical, P.C.	0.98	1.04	--
Cooley Dickinson PHO	1.00	--	--
Dedham Medical Associates	1.19	1.02	--
Emerson Hospital and Emerson PHO	1.10	1.04	1.05
Fallon Clinic Inc.	0.92	0.94	--
Family Med Associates LLC	1.07	--	--
Granite Medical	1.05	--	--
Greater Boston Primary Care Associates	--	1.05	--
Hallmark Health System	1.15	1.05	1.05
Hampden County Physician Associates, LLC	1.00	--	--
Harvard Medical Faculty Physicians at at BIDMC	1.01	0.96	--
Harvard Vanguard Medical Associates	1.13	0.95	0.94
Hawthorn Medical Associates	0.93	1.04	--
Highland Healthcare Associates IPA	1.00	1.00	--
Independent Physicians Affiliated with Physicians of Cape Cod Inc.	--	--	1.00
Lahey Clinic PHO	1.01	1.07	1.01
Lowell General PHO	0.96	0.90	0.87
Massachusetts General Hospital Physicians Organization	1.09	1.06	1.10
Medical Care of Boston Management	1.02	--	0.98
Merrimack Valley Physicians, Inc.	0.97	--	--
Metrowest Health Care Alliance	0.91	0.91	--
Mount Auburn Professional Services	1.19	1.02	--
MWA, P.C. d/b/a RiverBend	0.80	--	--
Nashoba I.P.A., Inc.	0.91	--	--
Newton-Wellesley PHO, Inc.	1.17	1.10	1.12

Table A3: Local Physician Group Relative Total Medical Expense Ratios
(continued from previous page)

Physician Local Practice Group	Blue Cross Blue Shield	Harvard Pilgrim Health Care	Tufts Health Plan
North Shore Health System / North Shore Physicians Group	1.07	1.08	1.06
Northeast Medical Practice Inc.	--	1.11	--
Norwood Southwood IPA	0.98	--	--
Pentucket Medical Associates	1.01	--	--
Physicians of Cape Cod Inc.	1.06	1.09	--
PMG Physician Associates, P.C.	1.21	1.15	1.16
Prima CARE, PC	0.95	--	--
Signature Healthcare Brockton hosp. / Brockton PHO	0.99	0.88	0.85
South Shore Medical Center	1.23	1.07	1.00
South Shore Physicians Hospital Organization	1.10	1.07	1.07
Southboro Medical Group	1.11	0.94	0.87
Southcoast Physician Services, Inc.	0.97	0.98	--
Saint Anne's IPA	0.95	--	--
Saint Elizabeth's Health Professionals	1.10	1.00	0.96
Steward Good Samaritan IPA	0.82	--	--
Sturdy Memorial Hospital & Associates	0.99	1.06	1.06
Tri-County Medical Associates	1.02	1.00	--
Tufts Medical Center (PT-NEMC)	0.98	0.87	0.98
U Mass Memorial Medical Group	1.03	1.00	1.02
Valley Health Partners PHO at Holyoke Medical Center	0.79	--	--
Valley Medical Group, P.C.	0.96	--	--
Whittier IPA Physician Group	0.91	0.90	--
Williamstown Medical Associates	1.01	--	--

DIVISION OF
Health Care
Finance and Policy

Acknowledgments:
Analysis provided by Oliver Wyman Actuarial Consulting, Inc.

Division of Health Care Finance and Policy
Two Boylston Street
Boston, Massachusetts 02116

Phone: (617) 988-3100
Fax: (617) 727-7662

Website: www.mass.gov/dhcfp

Publication Number: 11-175-HCF-01
Authorized by Gary Lambert, State Purchasing Agent

Printed on Recycled Paper